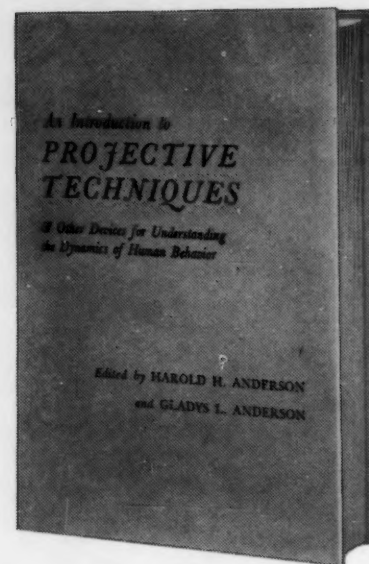


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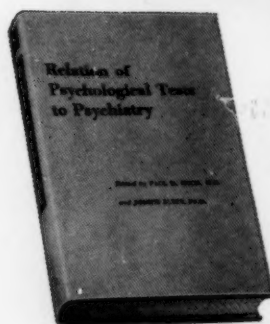
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PSYCHOLOGY AND THE NATIONAL SCIENCE FOUNDATION¹

JOHN T. WILSON

National Science Foundation

THERE may be some question as to whether "Psychology and the National Science Foundation" is as interesting a subject for discussion as would be "The Psychology of the National Science Foundation." The conditions surrounding the establishment of the Foundation, plus the current spate of interdisciplinary activity within psychology, might easily tempt one to contrive a rather fascinating theoretical piece on "The Rankian Concept of Birth Trauma as it Relates to the Behavior of an Organized Group." However, in the interest of conveying a somewhat more factual account of the present status of psychology in the National Science Foundation, we shall allay this temptation at least until such time as a more longitudinal analysis is possible.

The chronology of events preceding the establishment of the Foundation is known to at least a few psychologists, but it may be helpful to others if we review these briefly. Following prolonged legislative effort dating back to the days of World War II, the National Science Foundation was finally created by Congress in May of 1950 as an independent agency in the Executive Branch of the Federal Government (Public Law 507—81st Congress). The role that psychologists played in the early history of the Foundation has been noted previously (*Amer. Psychologist*, 1950, 5, 206), so we will not repeat it here. Subsequent to the passage of the bill, the President in late 1950 named a 24-member National Science Board which immediately started the work of organizing the Foundation's activities. The actual operation of NSF began in April of 1951. Since that time the Foundation gradually has been acquiring a staff, which has busied itself with the spadework necessary in carrying out the various programs which the Foundation may initiate and sponsor under its enabling legislation.

¹The statements contained herein are those of the author and should not be construed as reflecting the opinion of the National Science Foundation.

FUNCTIONS AND ORGANIZATION

The principal functions of the Foundation as authorized and directed by the NSF Act are as follows:

- (1) To develop and encourage the pursuit of a national policy for the promotion of basic research and education in the sciences;
- (2) To initiate and support basic scientific research in the mathematical, physical, medical, biological, engineering, and other sciences . . .
- (3) At the request of the Secretary of Defense, to initiate and support specific scientific research activities in connection with matters relating to the national defense . . .
- (4) To award . . . scholarships and graduate fellowships in the mathematical, physical, medical, biological, engineering, and other sciences;
- (5) To foster the interchange of scientific information among scientists in the U. S. and foreign countries;
- (6) To evaluate scientific research programs undertaken by agencies of the Federal Government, and to correlate the Foundation's scientific research programs with those undertaken by individuals and by public and private research groups;
- (7) To establish such special commissions as the Board may from time to time deem necessary . . . ; and
- (8) To maintain a register of scientific and technical personnel . . .

Numerous actions have been planned and undertaken by the Foundation in support of the rather broad charter defined by these functions. But before discussing the details of these, I should like to comment briefly on the Foundation's organization. In this regard, it should be noted that in large part, the existing organizational structure stems directly from specifications outlined in the National Science Foundation legislation.

"The Foundation," as defined in the Act, consists of "A National Science Board and a Director." The Board and the Director are appointed by the President, with the advice and consent of the Senate. As prescribed by the Act, Board members shall be "persons eminent in the fields of the basic sciences, medical science, engineering, agricultural, education, or public affairs, . . . selected on the basis of established records of distinguished service

. . . to provide representation of the views of scientific leaders in all areas of the nation."² President James B. Conant of Harvard University was named the first Chairman of the Board, and the incumbent, elected for a term of two years beginning in December of 1951, is Mr. Chester I. Barnard, past-president of the Rockefeller Foundation.

The Foundation's Director and chief executive officer is Dr. Alan T. Waterman, formerly Deputy Chief and Chief Scientist of the Office of Naval Research. The office of Deputy Director is held by Dr. C. E. Sunderlin, formerly Scientific Director of the London Office of the Office of Naval Research.

The various programs of the Foundation are administered by four Divisions, each headed by an Assistant Director of the Foundation as follows: (a) a Division of Mathematical, Physical, and Engineering Sciences, under the direction of Dr. Paul Klopsteg, on leave from Northwestern University Institute of Technology; (b) a Division of Biological Sciences, under the direction of Dr. John Field, currently on leave as Head of the Depart-

ment of Physiology at UCLA; (c) a Division of Medical Research, whose acting head is Dr. Field; (d) a Division of Scientific Personnel and Education, headed by Dr. Harry Kelly, formerly of the Office of Naval Research. Each Division encompasses several "program areas," responsibility for which is in the hands of a number of Program Directors who individually represent one of the several scientific disciplines under the cognizance of the Division. The Foundation Director's staff also includes a General Counsel, and an Assistant Director for Administration, the latter being responsible for such matters as exchange of scientific information, finance, and internal administration.

Under the terms of the Act there exists for each Division a "Divisional Committee," appointed by the National Science Board and consisting of a minimum of five persons (who may be members of the Board but under current practice are not). The function of each Divisional Committee is to advise and consult with the Board and with the Director regarding matters which relate to the programs and policies of its Division. In addition to its Committee each Division also maintains a roster of consultants from which *ad hoc* panels are formed as necessary, for the purpose of evaluating proposals which are being considered for support by the Foundation.

Within this organizational structure, psychology is one of some eight program areas under the Division of Biological Sciences. Other program areas in the Division include: genetics, biochemistry, microbiology, physiology, experimental botany, experimental zoology, and systematic biology. The advisory group for psychology consists of Drs. Frank Beach of Yale University; Lyle Lanier of Illinois; Donald Lindsley of UCLA; Donald Marquis of Michigan; and Quinn McNemar of Stanford. The program area covers "general experimental psychology," including measurement theory and research. However, in considering research proposals, the difficulty of rigidly delimiting any area of psychology is recognized and the merit of the research proposed is the primary consideration in determining whether or not it is recommended for support.

Social psychologists will be particularly interested in the absence within the present organizational structure of the Foundation of the whole domain of the Social Sciences. Within the Act, the specifications for the divisional structure of the Founda-

² The membership of the National Science Board is as follows: Sophie D. Aberle, Special Research Director, University of New Mexico; Robert P. Barnes, Head, Department of Chemistry, Howard University; Chester I. Barnard, Past-President, Rockefeller Foundation; Detlev W. Bronk, President, The Johns Hopkins University; James B. Conant, President, Harvard University; Gerty T. Cori, Professor of Biological Chemistry, School of Medicine, Washington University; John W. Davis, President, West Virginia State College; Charles Dollard, President, Carnegie Corp. of New York; Lee A. DuBridge, President, California Institute of Technology; Edwin B. Fred, President, University of Wisconsin; Paul M. Gross, Vice President and Dean of the Graduate School of Arts and Sciences, Duke University; George D. Humphrey, President, The University of Wyoming; O. W. Hyman, Dean of Medical School and Vice President, University of Tennessee; Robert F. Loeb, Bard Professor of Medicine, College of Physicians and Surgeons, Columbia University; Donald H. McLaughlin, President, Homestake Mining Co.; George W. Merck, President, Merck & Company; Frederick A. Middlebush, President, University of Missouri; Joseph C. Morris, Head of Physics Department and Vice President, Tulane University; Harold Marston Morse, Professor of Mathematics, The Institute for Advanced Study; Andrey A. Potter, Dean of Engineering, Purdue University; James A. Reyniers, Director, LOBUND Institute, University of Notre Dame; Elvin C. Stakman, Chief, Division of Plant Pathology and Botany, University of Minnesota; Earl P. Stevenson, President, Arthur D. Little, Inc.; Patrick H. Yancey, S.J., Prof. of Biology, Spring Hill College; Alan T. Waterman, *ex officio*.

tion include the Divisions described above, and as a sort of tagline state that "there shall also be within the Foundation such other divisions as the Board may, from time to time deem necessary." One may note, in addition, that the second function listed above contains the phrase, "and other sciences," which makes room for the eventual inclusion of Social Science within the programs of the Foundation. In support of these two possible openings in the Act itself, the legislative history indicates rather clearly that the phrase "and other sciences" was intended to enable the Foundation to support work in the Social Sciences at such time as it deemed desirable and propitious.

OPERATIONS OF THE FOUNDATION

The functions of the Foundation as listed above may be grouped into three general categories: (a) those having to do with the problem of scientific manpower, including scholarship and fellowship programs, (functions 4 and 8); (b) those having to do with the initiation and support of basic research in various domains of science (functions 2, 3, and 5); and (c) those having to do with the development of a national policy for the promotion of basic research and education in the sciences, including the evaluation of the Federal Government's own programs of research (functions 1 and 6). The 7th function is not a function in the same sense as the others, but merely indicates a possible technique for the prosecution of any of the others.

With reference to the functions in the scientific manpower category, these are administered by the Division of Scientific Personnel and Education. A significant beginning step in their support has been taken, with the initiation of the Foundation's fellowship program. For the academic year 1952-53, 624 National Science Foundation fellowships were awarded. This number includes 569 at the predoctoral level, and 55 at the postdoctoral, selected from about 3,000 applicants. Predoctoral applicants were required to take examinations in their specific fields, under a testing program administered by the Educational Testing Service, Princeton, New Jersey. Test scores, academic records, and recommendations regarding each candidate's abilities then were considered by panels of scientists in the respective fields of the candidates. This part of the selection procedure was administered by the National Research Council, under contract with the Foundation, following which Fellows were

finally selected by the Foundation. Postdoctoral applicants were not required to take examinations but their records and recommendations were screened by NRC panels, prior to final selection by the Foundation.

Five predoctoral and four postdoctoral fellowships were awarded in psychology. While this number may seem small in proportion to the total number of awards made, it represents more than a fair percentage as compared with other fields, in terms of the number of applications filed. The Foundation plans to continue its fellowship program in the coming year primarily on the predoctoral level, and will continue to make awards in the field of psychology.

Functions relating to basic research are supported by the programs of the Physical Sciences, Biological Sciences, and Medical Research Divisions. In this respect the Foundation, within the scope of its legislation, enjoys a substantial amount of freedom in the choice of means by which it supports research. Such support may be for a variety of purposes, including: the execution of research; field trips; development or purchase of instruments or equipment; modifications of laboratories or other facilities; training of personnel; abstracting, translating, or publishing scientific information; organization and administration of colloquia or symposia; foreign travel to scientific congresses or meetings; surveys of the national scientific potential; or promotion of research by organizations or groups not actually doing it, as for instance, the Pacific Science Board.

Because of the scope of its objectives, the Foundation will probably find it desirable to provide assistance from time to time for all of the above purposes. To date, however, such assistance has been primarily for the conduct of research on individual projects; for foreign travel; for organization of symposia; and for surveys of scientific potential in specific fields.

A word might be said here regarding the major steps in the selection of a research proposal to be supported by the Foundation. Normally, a proposal for a research project is initiated by the scientist who wishes to do the research. The proposal is forwarded to the Foundation, with the endorsement of the department head and an administrative officer of the institution. Upon receipt in the Foundation, the appropriate Program Director determines initially whether the proposal has a suffi-

cient degree of scientific merit to warrant consideration by an advisory panel, and whether it is within the scope of the NSF program and the budget of the Division. If the proposal meets these criteria, it is then reviewed by a panel of scientific consultants for its scientific merit, relation to contemporary research, unnecessary duplication of effort, the scientific ability and resources of the research staff, and reasonableness of the budget. Assuming recommendation for support by the panel, the proposal is considered by the Foundation staff, in the light of program balance, geographical distribution, legality, and relation to the national basic research effort. Proposals passing all of these hurdles are then presented for approval to the National Science Board, prior to final action by the Director, who makes the grant to the institution. In its grant program, the Foundation has a special interest in broadening the bases of research, and is giving particular consideration to proposals from promising younger men, and to proposals from smaller institutions that offer the promise of becoming new nuclei of research activities.

As of the end of fiscal 1952 (June 30, 1952), the Foundation had awarded approximately a hundred research grants (two-thirds of which were in Biological Sciences), out of some six hundred and fifty applications. These included, in psychology, a grant in the area of theoretical psychology to Indiana University for research on "Mathematical Models for Behavior Data" under the direction of W. K. Estes and C. J. Burke; and another, in comparative psychology, to Kansas State College for research on "Behavior Patterns of Solitary Hymenoptera," under the direction of H. E. Evans.

In addition to grants for the direct support of research, the Foundation's program includes foreign travel grants to scientists for the purpose of participation in scientific meetings abroad. In the last fiscal year such awards were made in the Biological Sciences to nineteen biochemists to enable them to attend the Second International Congress of Biochemistry, in Paris. In keeping with a policy of encouraging support for young scientists, eight of the biochemistry travel grants were awarded to young biochemists. The remaining eleven were made to senior biochemists, on the basis of their past contribution to research in biochemistry. One other form of research support has been utilized by the Biological Sciences Division, in underwriting a Committee on Photobiology, in co-

operation with the Division of Biology and Agriculture of the NRC, for the purpose of conducting a series of symposia on problems of photosynthesis.

Turning to the third group of functions—those having to do with the development of a national policy for the promotion of basic research and education in the sciences—it is in regard to these that the National Science Foundation can probably make its greatest and most unique contribution to the issue of science and the Federal Government. Support of these functions obviously cuts across divisional structure and involves the Foundation as a whole.

The problem of developing a national science policy has an important historical perspective. Toward the close of the war, when a National Science Foundation was first being considered, there was a widely felt need both in science and in government for a responsible government agency to take on the tasks of surveying the nation's scientific research efforts, of locating the gaps or areas of underdevelopment resulting from the rush of research and development activities of World War II, and of being responsible for actions which would ultimately lead to the best possible recommendations regarding the role of the Federal Government in the support of science. With continued failure over a period of several years to establish a National Science Foundation, a void was created with reference to a systematic national policy, particularly in regard to basic research support. In the meantime, a series of legislative acts established several government agencies such as the Office of Naval Research, Atomic Energy Commission, and the various National Institutes of Health, whose functions include the support of research. The passage of such legislation filled the research policy void in Topsy-like fashion, with a welter of uncoordinated and at times divergent policies relating to research support by the Federal Government. This has made it more desirable than ever, that a systematic policy with respect to the government's role in the support of research be developed. It is within this frame of reference that the President, in his 1953 Budget Message, stated that:

The National Science Foundation has been established as the government agency responsible for a continuing analysis of the whole national endeavor in basic research, including evaluation of the research programs of other federal agencies. . . . The Foundation will formulate a broad national policy designed to assure that the scope and quality

of basic research in this country are adequate for national security and technological progress.

The development and formulation of a national science policy obviously will take a great deal of time and effort. Questions which must be answered in developing such policy include those having to do with the total financial support now being provided for scientific research; the distribution of this support among governmental, industrial, and educational institutions; the most desirable distribution from these major sources; the division of research effort among the various sciences; the present and future need for scientific manpower; the impact of government support of research on the educational process and on the financial stability of universities and colleges.

As has been pointed out by the Foundation's Director:

Success in developing national science policy, in finding the most likely avenues of progress in science, in assessing our research needs, and in overall analysis of our present research activity will depend in the first instance on scientists themselves. No one else has their intimate knowledge of what science is and should be doing, or their understanding and insight into the nature and problems of research (*Science*, 1952, 115, 2988).

Consequently, the Foundation is leaning heavily in its policy development program upon the help to be obtained from individual scientists and from scientific groups. In addition to utilizing the skills and judgments of its Divisional Committees and its consultants, and such information as is developed through its research support programs, the Foundation is sponsoring a series of documentary "survey-inventories" of specific fields of science as a means of furthering its policy-formulating program. The purpose of these studies is to determine, among other things, the status of research in the field, the availability of trained manpower, the nature of the field's institutional and communication problems, and the amount of and results from interaction of the field in question, with other scientific domains. Through such surveys it is felt that the kinds of information and judgments needed in formulating a meaningful policy for the Federal Government's support of research will be obtained. One such project has been initiated with the American Physiological Society, under a contract with the National Science Foundation, for the purpose of determining the present status of affairs in reference to the field of physiological science. The

study is under the supervision of a committee of the Society, and the day-to-day direction of the work is being handled by a full-time executive director and his staff.

With respect to national science policy, psychology as a science will necessarily be considered by the Foundation. In this regard, there is currently under discussion, between the Foundation and the Policy and Planning Board of the APA, plans for a survey of psychology, analogous to that being made by the American Physiological Society. Factors motivating this discussion include the Foundation's interest in the support of psychology as science, and the interest of the Policy and Planning Board as reflected in the 1948 and 1951 reports of the Board.

DISCUSSION

So much for a description of the organization and the programs of the Foundation. However modest the progress in these two respects may appear to be, the most important factor is that there exists, within the Federal Government, a highly placed agency, authorized and directed to support basic scientific research, and to establish a national policy for research and education in the sciences. The importance of science in national affairs has been given a recognition never before achieved, and it should be of particular significance to psychologists that their science has a place in this scheme of things.

To convey a better understanding of the progress of the Foundation during its formative stages, and to enhance the recognition of the role that can be played most effectively by individual psychologists in support of the Foundation and its activities, I should like to discuss certain problems which confront the Foundation, over and above those relating to organization and programming.

In terms of its appropriations, the Foundation has been in a chronic state of difficulty ever since its inception. In fiscal 1952, for example, the total appropriation by the Congress amounted to only three and one-half million dollars, as compared to fourteen millions requested. In the current fiscal year it totals only four and three-quarters million dollars, as contrasted to fifteen millions which were budgeted.³ Such curtailed appropriations have had

³ Contrast the Bush report (Bush, V. *Science the Endless Frontier*, July, 1945) which, in initiating the idea for a national science foundation, called for an annual budget of

an important effect upon the rate of growth and development of the Foundation's programs.

The varied roles which the Foundation by its enabling legislation is capable of playing create another sort of problem, particularly during the first year or two of operation. On the one hand, scientists generally feel that the primary function of the Foundation is to further fundamental scientific research. On the other hand, those responsible for appropriations and budgets have upon occasion (*Congressional Record*, March 21, 1952, Vol. 98, No. 47; "Resources for Freedom," The President's Materials Policy Commission, Vol. I, June, 1952, p. 144) indicated that, to them, the Foundation's primary functions are the development of a national science policy and the evaluation of research programs currently under way in the numerous research-supporting agencies of the Federal Government. The question as to which of its several roles the Foundation can best assume or emphasize at this stage of its development is a serious and difficult one to answer.

There is another question in the minds of many scientists who have previously benefited from the research support programs of other government agencies: Is the NSF going to become the primary agency for the support of uncommitted basic research? Ostensibly the reply to this question is "yes," but with its limited budget, the Foundation has been, to some extent, "all dressed up with no place to go." The strongest evidence to support an affirmative answer is the very existence of the Foundation. In addition, the President, in his 1953 budget message, has reiterated that the Foundation shall ultimately become the principal agency through which the Federal Government gives support to "general purpose" fundamental research.

122.5 million. The President's Scientific Research Board (*Science and Public Policy*, Aug., 1947) stated that 250 million dollars would be a more suitable figure.

Other federal agencies are to be responsible for the support of basic research which is related to their missions. In the meantime, the important consideration is that in passing the responsibility for general basic research from other agencies to the Foundation, care must be taken to see that such research programs do not end up with too little support.

A question of importance to the large portion of the psychological profession whose interests lie in the direction of Social Science is the eventual place of Social Science in the program of the Foundation. Those psychologists who have been associated with the Human Relations programs of the Department of Defense are aware of both the real and imagined difficulties in gaining support for Social Science research within agencies of the Federal Government, even when it is directed toward problems of morale and leadership. In the face of such experience, social scientists unquestionably will watch with interest the Foundation's activity with respect to the support of research in their fields.

Such are some of the issues and problems facing the Foundation, which, along with those matters relating to organization and programming, should be of concern to psychologists. Despite the limitations of the Foundation's program with reference to Social Science, there are currently available research grant opportunities and fellowship opportunities for psychologists. Second, whatever the direct benefits may become in the future, the Foundation is of importance indirectly, because of its general roles affecting all scientific disciplines. It is particularly in this respect that psychologists, along with their colleagues in other fields of science, have a real stake in the Foundation. What this stake eventually amounts to will depend ultimately on the efforts of all of us.

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TEACHING PSYCHOLOGY ON TELEVISION

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RECENT surveys suggest that, in terms of television set ownership, psychologists and their professional brethren lag far behind the general population. But even though psychologists and their families are not generally enthusiastic television viewers, it seems probable that more and more psychologists will be called upon to be viewed on television screens. Already Professor Stromberg of Western Reserve is teaching a general psychology course for college credit and Johns Hopkins University has had experience in the field. Hence, my experiences in teaching a general psychology course by television may be of interest to other prospective competitors of Hopalong Cassidy.

The University of Michigan began in the fall of 1950 to cooperate with the *Detroit News* station WWJ-TV in producing a weekly one-hour television program. The program consists of three twenty-minute segments:

1. A unit of a 15-week course comparable to a traditional campus course, such as "Human Biology,"
2. A unit of a 7-week course of a more popular nature such as "Retailing," or "Photography," or "Understanding the Child,"¹
3. A feature on some aspect of the University such as a glee club concert or a visit to the synchrotron.

Students may enroll in either the 7-week or 15-week courses and receive supplementary written materials. If they return a completed copy of the course examination they receive a certificate of participation in the course.

In the fall of 1951 I was asked to organize and teach a 15-week telecourse titled "Man in His World—Human Behavior." Since I had never before appeared on television and do not own a television set, I had little conception of what I was getting into. Fortunately, the University's tele-

vision department,² and the WWJ-TV director, Walt Koste, already had a year's experience in putting on this type of program so that most of my trial-and-error learning took place off the television screen. The routine of preparing a lesson ran something like this:

Three weeks before program—Outline the lesson to two honors students in psychology who wrote most of the supplementary reading material. This material was mailed to the 700 students who registered in the telecourse.

Two and a half weeks before lesson—Edit supplementary materials.

Monday before lesson—Meeting with TV staff to outline lesson and discuss visual aids.

Wednesday—Rehearsal to check organization, clarity, and rough timing.

Friday—Rehearsal to get better timing, more clarity.

Sunday—In WWJ-TV studios in Detroit.

9:00—Rehearsal to get camera movements.

10:30—Be on set to adjust lighting.

11:00—Final rehearsal of entire program with cameras and lights.

1:00—On the air with over 100,000 people watching! (Audience surveys indicated an audience of 100,000 to 150,000.)

THE GOALS AND CONTENT OF THE COURSE

I happen to be one of those who feels strongly that the layman needs to gain a greater understanding of science and its values. As a psychologist, I'm particularly concerned that the public accept human behavior and experience as a legitimate area of scientific investigation. Finally, I think that knowledge of psychological principles and "best guesses" can be of interest and use to almost everyone. Thus I had two major goals for my viewers: (a) to value science and (b) to develop an interest in, and under-

² Garnet Garrison, Producer; Hazen Schumacher, Supervisor of Production; and Robert Newman, Script Editor.

¹ Taught by Professor Willard Olson.

standing of, human behavior. Because I wanted to give the layman some idea of the scope of psychology (and perhaps because I was lazy), I deliberately chose to model the course after my general psychology course on campus. The sequence of lessons was as follows:

1. Determinants of Behavior.
2. The Scientific Approach to Behavior—Guest, Donald G. Marquis.
3. The Cultural Background of Personality—Instructor, R. W. Heyns.
4. The Biological Background—Guest, N. R. F. Maier.
5. Abilities.
6. Perception.
7. Thinking.
8. Motives.
9. Learning (Habits)—Instructor, E. L. Walker.
10. Conflict, Frustration, and Defense Mechanisms.
11. Mental Illness and Mental Health.
12. The Structure of Personality.
13. The Development of Personality.
14. Interpersonal • Relations—Instructor, E. Lowell Kelly.
15. The Individual in Society.

Basically, I attempted to direct my students' thinking to the age-old problem of "What Is the Nature of Man." We started by looking at the person, then studied specific variables within the person determining behavior, and finally considered the whole person again. This sequence permitted easy integration and audience surveys showed that a relatively large proportion of our audience attempted to follow the course from beginning to end.

Obviously, none of these topics could be covered in detail in twenty minutes, so that selection of materials was a major problem, as it is in most teaching. In most lessons I tried to organize the material around three or four major points. However, in the television lessons I couldn't refer back from one point to another by a word. I always had to remember that part of my audience might have tuned in late and might be asking, "What does he mean by 'perception'?" I expect to carry back to the classroom some of this emphasis upon repetition and rephrasing, for I suspect that my college students, too, may not always be "tuned in" to my lectures.

One of the biggest problems I faced in trying to pack psychology into twenty-minute capsules was that of presenting the material in a way which would be scientifically sound, yet interesting and useful to my audience. In the limited time available it was impossible to give conflicting psychological points of view or even to include many of our conventional hedges, such as: "it is probable," "in a rather inadequately controlled experiment, Prof. X found," or "Prof. A found such-and-such, but his results have not been confirmed." I was particularly concerned about the lesson on "Mental Illness," since I not only had to consider the viewpoints of professional workers in the field, but the probability that out of over 100,000 viewers, someone would be threatened by almost any symptom I described. In this lesson, as in all others, my colleagues in the psychology department were very helpful in reading my notes and suggesting ways of wording the material to reduce anxiety. Using my own behavior as an example of certain defense mechanisms was one of the techniques we used.

The importance of academic freedom had been demonstrated by the success of an earlier course in "Human Biology," taught by Professor Karl Lagler. Thus, while I didn't joke about sex, I was free to discuss it and any other touchy topics which were necessary to the course.

I was also surprised to find that technical terms were not frowned upon. However, my directors did insist upon clear explanations, and I often discovered that a term which I had used very glibly was not so clear in my mind that I could define it or explain it in any coherent fashion. While we avoided fancy words if plain ones would do, we worked on the assumption that one of the student's indices of achievement is the addition of new words to his vocabulary. Hence we by no means avoided using, and defining, new terms.

TELEVISION TEACHING TECHNIQUES

To me, the outstanding feature of television as an educational medium is that while one is teaching a large number of students each one of the students is seated just across the instructor's desk. Demonstrations which would be unusable in large lectures can be brought directly before the student's eyes.

However, television also imposes limitations. Broad, sweeping gestures, vigorous floor pacing, little mannerisms, are mercilessly magnified by tele-

vision. Most of the time my working space was less than 10 feet square. If I stepped a few feet out of position, the camera exposed unused backdrops, tangles of wires, and extra props.

In most lessons, after a review of previous lessons I began with an everyday problem which I related to the psychologist's conception of the topic of the lesson. In answering these questions I tried to give prominence to experimental results even though I usually did not describe experiments in detail. I concluded each lesson with a summary, and frequently pointed out a practical implication of the principles discussed.

A major portion of each lesson was spent in lecturing, but whenever possible visual aids were exploited. We used dramatic scenes with actors recruited from the speech department, role playing, interviews, films, posters, three-dimensional models, flip cards, photographs, and blackboard.

Probably our most successful teaching device was a two- or three-minute scene which we called a "Behavior Drama." These were interpersonal incidents in family life, at work, or in a social group which involved two or three people. Our script writer, Robert Newman, possessed not only a fertile imagination but also a good knowledge of psychology. Usually, all I had to do was to indicate the points I wanted brought out, and he would devise a scene which was not only educational but of much interest to our viewers. One of the features of our "Behavior Dramas" was that we could stop the action or later in the lesson refer back to a specific incident and get not only the spoken words but the unspoken thoughts or even the unconscious feelings behind the thoughts. These unspoken words were on records which were played through a filter. Often we used these as a dramatist would use soliloquies.

We also tried an unrehearsed role-playing scene. The scene I used was one which I had used many times in my classes and illustrated my point well, but seemed to have few advantages over our rehearsed dramas. Its disadvantages were that all of the production personnel as well as the role players suffered a good deal of anxiety. With the necessity for exact timing, the careful planning of camera patterns, and the terrific stress which the television director must undergo even in a well-rehearsed program, role playing seemed like too much of a risk. However, I still think that with experienced role players and an experienced teacher,

role playing could be a more suspenseful and more lifelike teaching device than scripted dramas. The necessity for careful planning and smooth development of ideas was also an argument against unrehearsed discussions or question-and-answer periods, which we considered as teaching techniques.

We did use interviews with much success. During the course I interviewed Donald Marquis, Norman Maier, and Dr. Maier's identical twin sons, Jack and Charles. If both interviewer and the interviewee are to appear on camera, they must stand uncomfortably close together. In answering a question the interviewee is frequently visibly torn by the conflict between looking at the camera and looking at the interviewer. I tried to reduce this conflict by asking "Would you tell *our students* how . . . ?" We found that while we planned the general pattern of questions to be asked in the interview, the viewers like the spontaneity of interruptions, incomplete sentences, and requests for clarification.

Films seem like naturals for television, and I should have liked to use more of them. However, I had to make my points as quickly and clearly as possible. It's amazing how difficult it is to find a scene from a film which will clearly illustrate a given principle. Even in those cases where I knew of such films, we felt that the impact would be greater if we could do it "alive." Thus the only film I used was an excerpt from the Kellogg "Ape and Child" series. It was very popular with our viewers.

Posters, models, flip cards, etc., were our stock in trade. The principles of construction of such aids are already well known, but many were new to me. I especially enjoyed using pull cards. Ours included such simple things as "Behavior = Person \times Situation." The "Person" pulled out to reveal "Perception," "Motives," "Abilities," "Thinking," "Habits." Another card with three pulls showed a man. One pull revealed "Threat" and two pulls changed the expression of the man's face and revealed the word "Anxiety." In these as in other cards, the drawing appeared rather crude and overdone to the naked eye, but fine shadings simply don't show up on the television screen. Similarly we had to learn to avoid putting too many things on one card.

In using the pad which served as a blackboard, I had to break one of my classroom habits. In the classroom, I refrain from speaking while my back

is to the class; on television the microphone followed my movements so that I could speak at any time. To save time, I often wrote the concepts I planned to emphasize before going on the air, and simply underlined them as I spoke rather than writing them out.

WHEN YOU APPEAR ON TV

One o'clock approaches. The floor manager shouts "Places!", and you step out under the bright, hot lights. You're probably dressed in a light blue shirt, a gray flannel or dark blue suit, and a plain or striped tie. (Starched white shirts, patterned suits, and figured ties are apt to make odd light patterns on the TV screen.)

"Two minutes."

"One minute."

"Quiet, please."

The announcer introduces you, and you watch the monitor TV set to see the title card with the name of today's lesson. Then the floor director brings his index finger down pointing to you, and you're on. In front of you are at least two cameras which move back and forth, in and out, varying camera angles, and preparing for the next visual aid to be used. A red light (on one of the cameras) indicates that this is the camera whose picture is being used. As you look into the lens, you appear to the viewer to be looking directly at him. Just above and in front of your head is the microphone

on a boom. It will move as you move. Between the two cameras is the floor manager wearing earphones so that he can signal to you anything which the director, who is in the control room, thinks you need to know. During the show the floor manager points from one camera to the other as the shots shift. He also gives time signals—a rotary motion of the hand to speed up; a taffy pulling motion of both hands to indicate "stretch it out"; "two minutes to go"; "one minute more"; and a clenched fist for "finish up!"

Beside the cameras stands someone holding your notes written in large black letters on large sheets of paper. You will be able to glance at them just as you glance at your lecture notes in the classroom, and just as in the classroom you may skip, add, and reorganize as you go, so long as you remember that you must not vary more than a few seconds in your timing.

Just a few feet to either side of you stand stagehands who will pull your pull cards, set up and remove your models, and hand you the pen for writing on the pad when you discover that you've forgotten it.

Seated on a sofa behind you are the actors whom you'll introduce as you set the scene for today's "Behavior Drama."

You're on TV!

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COLLEGE CREDIT FOR TELEVISION HOME STUDY

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WESTERN Reserve University has been experimenting with television education since the telecast channels in Cleveland, Ohio were first opened. The early programs were most important for they demonstrated the need for carefully evaluating the kind of program which might best represent the University as an agent of community service and also as a source of formal higher education.

The pattern was soon resolved into two kinds of programs. One of these was an informative program concerned with important service functions of the University, worthy community activities, current issues of local importance, and the dramatic portrayal of social problems. The second type of program took the form of classroom teaching. Short courses in economics, foreign languages, etc. were presented from the studio, some with students present and some with the lecturer only being viewed.

In the spring of 1951 the Television and Radio Committee of the University requested me to present to them an outline for a 13-week course in Introductory Psychology which might be presented in three half-hour periods per week and for which the viewer might register for college credit. This outline was cleared by the University Curriculum Committee although some questions were raised about the advisability of granting three semester hours of credit for 19½ hours of classroom lecture. These questions are at least partially answered later in this paper. The requirements for credit involved the regular registration at \$16.00 per credit hour, which included the syllabus and home study workbook. Nine assignments from the workbook (including 24 chapter assignments) were to be mailed in during the course. The tenth assignment was a 1,500-word paper on "How my study of general psychology will help me in my daily living." During the final week of the semester all credit students presented themselves for a written final examination on all work covered.

The course began in September 1951, at the opening of the fall semester. The 13 weeks represent

the regular quarter in the studio calendar. The final examination occurred 16 weeks after the lectures began. This adjustment to a commercial studio's schedule is one of the difficulties we faced. In this instance it was a minor difficulty. In our subsequent course the studio quarter did not coincide in any way with the university calendar and several problems arose.

The course in introductory psychology was presented over Cleveland's station WEWS, which provided the University with time from 9:00 A.M. to 9:30 A.M. five days a week. Psychology (1) occupied the Monday-Wednesday-Friday hour and Comparative Literature (2), a two-hour course, was presented on Tuesday and Thursday. The 39 lectures in psychology were equally divided between Mr. Richard Wallen (3), Mr. Peter Hampton, and myself. Thus, each of us could present those topics about which he preferred to lecture.

In reading Professor McKeachie's report about the Michigan program I am impressed by the work which has gone into his twenty-minute, once-a-week program. If we had spent a comparable amount of time we would have been overwhelmed by our task. Perhaps Professor McKeachie will think we have not put enough effort into our course. I have seen the detailed script for his program and I am grateful to our director for making it possible to present the program as we did.

I would like to describe our procedure briefly and to give credit to the chairman of the University department of dramatic art, Professor Barclay Leatham, for making our work successful. Mr. Leatham met regularly once a week with the instructors involved to discuss techniques and problems. At the meetings he stated and restated his feeling that as director of the program he was playing the part of a leech upon talent. He said "You give the lecture in the best way you can and I'll give the viewers the opportunity to see you at your best." He "cut" all the programs and from his reports on the difficulties he encountered we tried to make our next program better.

So it was that no program in our series of 39 was formally rehearsed. We arrived at the studio about 8:30 A.M., bringing with us such visual aids material as we might need. We used slides, flip cards, pictures, films, published graphs and tables, and such apparatus as might photograph well. We then presented Mr. Leatham with a time schedule describing the materials to be used at certain times during the lecture. We were not expected to meet that schedule to the minute since it was at best an approximation. By 8:45 our set was in place, and we placed on the blackboard whatever information we wished.

A word about our set might be appropriate. It consists of a large window in the background flat through which a greatly enlarged photograph of one of the University buildings can be seen. The two diagonal wings are fitted with hangers permitting the placing of a blackboard on each, or the use of a bookcase or charts, maps, etc., interchangeably. A small desk and a chair complete the lecture area.

We had used the first edition of Munn's *Psychology* in our regular credit courses since 1946. This fall we were using another text in the regular course and so chose Munn's second edition for the telecourse student. This book was supported by Valentine and Wickens' *Experimental Foundations of General Psychology*. The Johnson and Munn *Workbook* was used for the home study work. The section containing answers to the test questions was removed before the workbook was sent to the student. This procedure posed some difficult problems, for the students thought they should be entitled to the full contents of a book which they had purchased. However, since this workbook was included in the regular tuition cost as a part of the home study assignments we felt we could use the material as we wished. We were also sure that no other college in this area was using the revised Munn text.

When registration was complete, 66 students had registered for the 3 semester hours of credit which cost \$48.00. The two textbooks were not included in this fee but were available by mail from the University. An additional 472 had registered as auditors and paid a five-dollar fee for which they received the syllabus and workbook. Many of the auditors also purchased the two textbooks.

These credit students and auditors were found in a geographic area beginning at the western end of Lake Erie, and extending south into Ohio about 70

miles and eastward into the western part of Pennsylvania. No estimate could be made of the non-registered viewers outside of Cleveland but various tabulations indicate that about 70,000 persons within the Cleveland sampling area participated regularly in the sessions.

Several of the credit students, 13 in number, found it desirable during the first weeks of the course to cancel their credit registration. They were permitted to change from credit to auditor status if they wished. Of the remaining 53 students, 10 failed to complete the course, 10 asked for additional time to complete the written work and 35 presented themselves for the final examination. This is 66 per cent of those who had not formally dropped the course. If those whose work is now incomplete should finish it within the University limits (one semester) 81 per cent will have completed the work. Recent information from a midwestern university which takes great pride in its home study courses indicates that between 20 and 30 per cent of their correspondence students complete the work and receive credit. It appears that the telecourse not only stimulates home study students to complete the work but also provides substantial course material for those who have no desire to receive credit for their participation.

During the years that we had used the first edition of Munn's text we had prepared several alternative standardized examinations covering the course as offered in multiple sections by several instructors. We chose one of these, a test of 110 multiple choice items, for the final examination. As previously given to about 1,200 students the range of scores was from 31 to 95 with a median score of 54. For the telecourse students the range was from 35 to 95 with a median score of 68. There has undoubtedly been some selection in the telecourse group which eliminated the less capable before the examination, but it is apparent that those who receive credit by television home study have achieved as much as the regular students who, it is assumed, have a much greater opportunity to learn and have a closer tie with the instructor.

We have also been amazed at the splendid term papers some of these students have written. Even though the age range was from 19 to over 50, and although some had not been in school for over 30 years, the papers were stimulating, thoughtful, and often refreshing.

A word should be said about the nonregistered

students. Countless letters have come in commending us on our effort and asking that the University continue to offer more courses. I have met many people who listen and view us regularly and I believe their favorable comments are sincere. Study clubs have been organized among housewives to study cooperatively with us. Elderly men and women in their retirement have told us how much it means to them to be able to study and to enter new unexplored areas of science.

Even though our course was designed for the credit student and was not adulterated at all, the noncredit viewers have been pleased with its detail, its soundness, its applicability, and its challenge. I would suggest that others who plan to present psychology over television make certain that they do not underestimate their audience. We do not need to water our stock. There are already too many nonprofessional people who wish to capitalize on our subject matter by popularizing it, until I fear that it will lose much of its value. The audience for sound discussion of scientific psychology is limited only by the hours available for the telecast and the range of the station.

I believe that the success of our course, using only the teaching methods we ordinarily use in the classroom, is due in a large measure to four things; (a) the careful choice of instructors who can make the subject matter live, and I say this modestly for my colleagues gave the course that special flavor, (b) the unwillingness to compromise on any of the subject matter in order to make it seem like a new-found magic, (c) the straightforward approach without staged drama or other practices not ordi-

narily found in the classroom, (d) the philosophy of Mr. Leatham who believes that television in education must be adapted to the professor and not the professor to the television medium.

We believe that what we are doing is educationally sound and we are currently presenting a three-semester-hour credit course in child psychology. This course has introductory psychology as a prerequisite. Despite its beginning during the Christmas holidays and the prerequisite, it has 30 credit students and a large noncredit audience. Western Reserve University also believes the telecourse is sound educationally and is currently offering a three-circuit course in physical geography and presented two additional credit courses beginning last March. We have only scratched the surface for we believe that education is a continuing process which should be a part of every adult's life. These people are hungry for educational programs prepared for adults, and will make every effort to read, view, and understand the subject matter. The television medium appears to have been invented for educational purposes. I hope the story of our small success will stimulate others to take advantage of this unique opportunity.

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A FOLLOW-UP OF UNDERGRADUATE PSYCHOLOGY MAJORS

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THE rapidly increasing number of psychologists in recent years have focused attention upon prospective candidates for admission into the field. Generally such interest has centered upon graduate students and little attention has been paid to the undergraduate level. This attitude seems to reflect a serious oversight since it is the undergraduate population from which the graduate schools must recruit their trainees.

The writer, impressed by the large number of undergraduate students majoring in psychology at New York University and by a "Notes and News" item in the January 1950 issue of the *American Psychologist* (p. 26) which ranked New York University as the second leading undergraduate producer of the 1949 crop of PhD's in psychology, investigated the trends in registration of the 1939-1949 psychology majors and minors in Washington Square College (one of the four colleges within New York University which have undergraduate psychology departments). That study (1) revealed a rise in the proportion of psychology majors from 3 per cent of the 1939 graduating class to 13 per cent of the 1949 graduating class, with an increase in absolute numbers from 19 in 1939 to 197 in 1949. Then, in order to determine how many of these undergraduates actually continued on to professional status, a follow-up study was conducted, the results of which are recorded in this paper.

A postcard questionnaire was mailed with a covering letter to the 680 students who graduated from Washington Square College as psychology majors during the years 1939-1949, inclusive. The questionnaire called for information concerning graduate studies, nature of vocational experience, whether current job is related to the field of psychology, current salary, and reasons for selection of an undergraduate major in psychology. A blank space was provided for spontaneous remarks.

Of the 680 graduates (332 men and 348 women), 232 responded (139 men and 93 women) or 34 per

cent of the total. The balance of this paper is confined to a study of the group of respondents.

As can be seen from Table 1, 44 per cent of the persons answering the questionnaire (54 per cent of the men, 30 per cent of the women) have at some time in the past pursued graduate studies in psychology, or are currently doing so; 24 per cent (27 per cent of the men, 18 per cent of the women) were in other graduate studies; and 32 per cent (19 per cent of the men, 52 per cent of the women) have had no graduate study at all. The preponderance of men over women continuing education beyond a baccalaureate degree seems to be in line with other studies on the relative numbers of men and women in professional studies.

The results indicate that somewhat over a third of the respondents have already entered a career in psychology. As noted in Table 1, 36 per cent (44 per cent of the men, 24 per cent of the women) listed themselves as currently employed in jobs of a psychological nature, e.g., psychologist, school psychologist, psychometrist, etc. Some of the respondents are still of too recent vintage to be employed in any field. Of these, an additional 6 per cent (8 per cent of the men, 3 per cent of the women) are at present full-time graduate psychology students, while another 3 per cent are simultaneously working at full-time jobs in other fields and carrying on part-time graduate studies in psychology.

The fact that approximately two-thirds of the undergraduate psychology majors failed to enter the field professionally should not be a source of discouragement for psychology departments, nor be considered to indicate a waste of training. Rather, it can be viewed as affording an opportunity to present an accurate conception of psychology to the general public who may later have contact with psychologists, and providing a certain amount of psychological knowledge for persons who may wish to use it as a "service" subject, i.e., as a valuable

adjunct to their main work. The statements of respondents employed in other fields and of full-time housewives and mothers as to whether they considered psychology related to their work are pertinent in this respect. Of the 93 persons who stated they are currently employed in other fields and the 22 women who are full-time housewives and/or mothers, 71 felt psychology was either directly or indirectly related to their work; 34 saw no relationship between the two; and 10 (all housewives) omitted answering the question.

It is interesting to see in which types of work a knowledge of psychology was considered most useful. All respondents employed in the following occupations agreed they had found psychology to be either directly or indirectly related to their work: social workers, teachers, clergymen, physicians and nurses, employment and job placement workers. Those who made spontaneous comments cited the need for understanding and evaluating human motivation and behavior in connection with their work. A few persons commented on their utilization of special psychological techniques such as test in-

terpretation and job analyses. Among respondents employed in the following occupations, the majority found psychology directly or indirectly related to their work, but a few in each group reported no relationship at all: managers, salesmen, advertisers, housewives, and mothers. Of the respondents employed in the following occupations, only a few found psychology directly or indirectly related to their work, while the majority saw no relationship: accountants, lawyers, business executives. Respondents in clerical work unanimously reported psychology unrelated to their work.

Current salary was reported by 49 employed psychologists (36 men and 13 women) and by 83 persons otherwise employed (47 men and 36 women). The data in Table 1 show that the men as a group have done slightly better financially in nonpsychological jobs than in psychological work, whereas the women as a group are earning considerably more as psychologists than as nonpsychologists. The explanation seems to be that the nonpsychologist women are largely in clerical and secretarial work, very few being in professions or in upper-level busi-

TABLE 1

	Male		Female		Total	
	N	% of 139	N	% of 93	N	% of 232
Pursued graduate study						
In psychology	74	54	28	30	102	44
In other fields	38	27	17	18	55	24
No graduate study	27	19	48	52	75	32
Present occupation						
Psychologist	61	44	22	24	83	36
Full-time graduate psychology student	12	8	3	3	15	6
Nonpsychologist	51	37	42	45	93	40
Full-time graduate student, non-psychology	15	11	4	4	19	8
Housewife/mother			22	24	22	10
Usefulness of psychology in other work						
Yes	15		13		28	
Indirectly	22		21		43	
No	14		20		34	
No response			10		10	
Current salary						
Psychologists						
Range	\$1,785-\$12,000		\$2,250-\$5,000			
Median	\$3,950		\$3,750			
Nonpsychologists						
Range	\$2,000-\$15,000		\$2,100-\$10,000			
Median	\$3,986		\$2,860			

ness positions. Men, on the other hand, are in professions in larger numbers and, if in business, may have risen to executive positions. The usual male-female salary inequality is relatively small for the persons of this group employed in psychological positions.

The question concerning reasons for selection of an undergraduate major in psychology elicited the answer "interest" in subject matter from 127 of the 232 respondents. Some of these individuals explained how such interest had arisen, i.e., 7 had been engaged in some phase of psychological work during military service, 4 had had previous civilian psychological work experience, and 24 had found the introductory courses interesting.

Reasons other than "interest" are as follows. Since many respondents named several factors the total number of reasons exceeds the number of respondents. Seventy-three had decided to make a career in the field of psychology; 26 felt it would be useful as an adjunct to their main vocational goal, e.g., social work; 15 hoped it would help in the solution of personal problems; 11 stated they did not know why they had chosen it; 10 did not respond at all; 5 found the subject matter easy; 5 thought it would be good general background; 4 looked upon it as an alternative field of work if they did not gain admittance to medical school; 3 planned to use the knowledge in motherhood; and 1 wished to assist her husband who was already in the field.

The need for wider publicity concerning the professional standards required in psychology was brought to light by some of the spontaneous comments. Eighteen persons stated they were not able to continue study for advanced degrees and therefore could not obtain jobs in the field of psychology.

From their statements, the necessity of undertaking graduate work appeared to be something of which they were unaware during their undergraduate days and which first became apparent to them when they made an attempt to secure employment. One respondent still felt strongly about it and actually wrote the author a long letter which detailed her difficulties, i.e., lack of money for graduate training and rejection for jobs in personnel because of her youth. Undergraduate students of the decade 1939-1949 were fully aware of the need for graduate training in other professions, yet some respondents believed at that time that a baccalaureate degree would be sufficient in psychology. The author, in discussing vocational plans with undergraduates and their parents, finds that such an erroneous impression is still held by many. It is, therefore, a problem of deeper significance than disappointment of a few individuals in failing to secure a position immediately after graduation, important as that is. If persons who are undergraduate majors in psychology do not know the extent of training required to become a professional psychologist, how can the general public be expected to be able to evaluate the qualifications of psychologists from whom they may seek professional help? Statements during class lectures and in individual counseling seem to reach too few people. Perhaps the answer lies in the publicity attendant upon establishment of standards by means of legal certification or licensing.

REFERENCE

1. GUSTAV, ALICE. Trends in registration of undergraduate psychology students. *Amer. Psychologist*, 1950, 5, 492-494.

Manuscript received December 17, 1951

PROCEEDINGS OF THE FORTY-FOURTH ANNUAL MEETING OF THE SOUTHERN SOCIETY FOR PHILOSOPHY AND PSYCHOLOGY

D. MAURICE ALLAN, *Secretary*

Hampden-Sydney College

THE forty-fourth annual meeting of the Southern Society for Philosophy and Psychology was held at Knoxville, Tennessee, April 10-12, 1952. All section and business meetings were held in the Farragut Hotel. The host institution was the University of Tennessee. Local arrangements were under the efficient direction of Dr. Willis Moore, Dr. James M. Porter, Jr. and Mrs. Louise W. Cureton. The Program Committee consisted of Dr. Glenn Negley, Dr. Karl Zener, and the Secretary.

The Council of the Society met on the evening of April 10. Those present were President John B. Wolfe, D. Maurice Allan, Edward G. Ballard, Marion E. Bunch, Stanford C. Ericksen, Gerard Hinrichs, William M. Hinton, Willis Moore, and Herbert C. Sanborn.

The Program began with an Open House at the Psychological Service Center and a showing of psychological films in the Volunteer Room of the Hotel. Five sessions in philosophy and six sessions in psychology were held on Friday. On Saturday morning there was a symposium on the Measurement of Value with Willis Moore presiding. Chairmen of the philosophy sections were: George Abernethy, E. M. Adams, Harold N. Lee, Anna Forbes Liddell, and Howard L. Parsons. Chairmen of the psychology sections were: William Bevan, Jr., Elizabeth Duffy, Stanford C. Ericksen, Nicholas Hobbs, Sigmund Koch, Harold McCurdy, John P. Nafe, and Burke Smith.

At the Society's annual banquet on Friday night Dr. John B. Wolfe delivered the presidential address which was entitled "Psychology's Growth and the Southern Society."

MINUTES OF THE ANNUAL BUSINESS MEETING

President Wolfe called the meeting to order at 11 A.M. Saturday. The minutes of the forty-third annual business meeting were approved. The re-

ports of the Secretary and Treasurer were read and approved. The former reported that the circularizing of the membership for nominations for vacant offices, inaugurated this year, was responded to by only 10 per cent of the members. A balance of \$945.97 was reported in the treasury. Including new members, the membership totals 445.

Dr. A. G. A. Balz presented his report as delegate to the Southern Humanities Conference. Dr. Harold N. Lee, Chairman of the Advisory Standing Committee, reported that no complaints of violations of academic freedom had been received during the year. President Wolfe announced that Dr. Willis Moore had been appointed to succeed Dr. Lee whose term on the Advisory Standing Committee has expired.

On recommendation of the Council, eleven new associate members and thirty new members were elected to the Society. The associate members are: Louis Acuff, Zelmor Haber Brody, Robert L. Brown, Dorothy June Day, William Franklin Freeman, James Joseph Kirkpatrick, John Wilson Nichols, Finis Winston Poole, Robert Raymond Shrader, Pauline Wengate, and Gerald Henry Whitlock.

The full members are: George Lawrence Abernethy, Robert Lowell Arends, Malcolm Douglas Arnoult, Graham Barnat Bell, John Robert Bross, Grace Edith Cairns, Alonzo Joseph Davis, Herdis LeRoy Deabler, Robert Eugene Dewey, Frank Maurice du Mas, Charles Fowler Elton, Hiram Landor Gordon, Lewis Edwin Hahn, (Mrs.) Jane Ross Hammer, Arthur L. Irion, Hudson Jost, Marion Frances Jurko, Winthrop Niles Kellogg, Edward Joseph Keyes, Theodore Landsman, Clyde E. Noble, Slater Edmund Newman, Gerald Ross Pascal, W. Bernard Peach, Eliot H. Rodnick, Chandler G. Screven, Burke McGuire Smith, Louis Leon Thurstone, Thelma Gwinn (Mrs. Louis L.) Thurstone, Henry Nelson Wieman.

A motion by Dr. Joseph E. Moore that the newly

elected members should be allowed to vote from this point on was carried.

The following officers and Council members were elected by the Society: President, Willis Moore; Secretary, Oliver L. Lacey; Council members, Glenn Negley and Karl Zener. William M. Hinton continues as Treasurer.

It was moved and carried that the Society accept

the invitation of the University of Texas to hold the next annual meeting in Austin, Texas.

The Society unanimously recorded its gratitude to the University of Tennessee, the Committee on Arrangements, and the Farragut Hotel for their hospitality; also to Mrs. Edward E. Cureton and Dr. Lewis E. Hahn for their placement services. The meeting was then adjourned.

PROGRAM

Friday Morning

Philosophy Section 1: Aesthetics

HAROLD N. LEE, Chairman

The cosmology of Goethe's Faust. R. L. ARENDS, *Florida State University*.

Averages of aesthetic taste as evidence in aesthetics. LAURENCE J. LAFLEUR, *University of Akron*.

Art versus aesthetic in Aristotle. JOHN S. MARSHALL, *University of the South*.

The aesthetics of Byzantine art. CONSTANTINE CAVARNOS, *University of South Carolina*.

The semantic interpretation of a Platonic problem. CARL H. HAMBURG, *Tulane University*.

Philosophy Section 2: Epistemology

E. M. ADAMS, Chairman

Fact and proposition. G. E. HARMSE, *University of Virginia*.

A problem in dialectic. EDWARD G. BALLARD, *Tulane University*.

The motherological fallacy, or the limits of common sense. ROBERT E. DEWEY, *University of Maryland*.

The role of induction in metaphysics. RICHARD L. BARBER, *Tulane University*.

Aristotelian epistemology. S. R. KNIGHT, *University of Virginia*.

Philosophy Section 3: Symposium: Science and Methodology

GEORGE L. ABERNETHY, Chairman

Science and society. RUBIN GOTESKY, *University of Georgia*.

The problem of language. HERBERT C. SANBORN, *Vanderbilt University*.

Reporting operations research based on factor analysis. GERARD HINRICHS, *JHU Operations Research Office*.

Friday Afternoon

Philosophy Section 4: Ethics and Value Theory

HOWARD L. PARSONS, Chairman

A definition of social ethics. JOHN T. COCUTZ, *University of Georgia*.

The ethics of belief. JOHN KUIPER, *University of Kentucky*.

Shaftesbury, the mathematical analogy, and conduct. BERNARD PEACH, *Duke University*.

The nature and relations of fittingness as an ethical concept. D. MAURICE ALLAN, *Hampden-Sydney College*.

Purpose in history. QUINTER M. LYON, *University of Mississippi*.

Philosophy Section 5: Philosophy of Religion

ANNA FORBES LIDDELL, Chairman

Ontology the cure of secularism. FRITZ MARTI, *Marietta College*.

Ethics in a theological manner. SARAH WATSON EMERY, *Duke University*.

What commands ultimate commitment. H. N. WIEMAN, *University of Houston*.

The aesthetic component of religion. GRACE E. CAIRNS, *Florida State University*.

The concept of self of contemporary Protestant theology. PAUL E. PFUETZE, *University of Georgia*.

The metaphysical matrix of science. PETER A. CARMICHAEL, *Louisiana State University*.

Friday Morning

Psychology Section A: Perception and Sensation

JOHN P. NAFE, Chairman

The perceptual analysis of visual shapes and patterns. FRED ATTNEAVE, *Human Resources Research Center*.

The dependence of judged area upon color. WILLIAM BEVAN, JR. and WILLIAM F. DUKES, *Emory University*.

A correlational investigation of motivated perceiving. WILLIAM F. DUKES and WILLIAM BEVAN, JR., *Emory University*.

Further studies of visual symbols for purposes of communication. R. H. HENNEMAN, *University of Virginia*, and R. W. QUEAL, JR., *USAF Aero Medical Laboratory*.

The effect of training upon sensory organization. EDWARD J. KEYES, *Veterans Administration Hospital*.

Perceptual defense in normal and in schizophrenic observers. ELLIOTT MCGINNIES and JOSEPH ADORNETTO, *University of Alabama*.

Occupational and physiognomic stereotypes in the perception of photographs. PAUL F. SECORD, WILLIAM BEVAN, JR., and WILLIAM F. DUKES, *Emory University*.

Psychology Section B: Experimental Clinical

NICHOLAS HOBBS, Chairman

The effect of induced failure and success on the retentive processes of anxiety patients and normal subjects. ARNOLD KRUGMAN, *University of Kentucky and VA Hospital, Lexington, Ky.*

A study of level of aspiration variables in psychopathic, neurotic, and normal subjects. MURRAY J. LONSTEIN, *University of Kentucky and VA Hospital, Lexington, Ky.*

The registration by the Rorschach test of hypnotically induced hostility and depression. FRANK A. PATTIE, *University of Kentucky*.

The influence of vivid auditory hallucinations on psychological test performance—a case report. MORRIS ROSEMAN, *Roanoke VA Hospital*, and JOSEPH I. C. CLARKE, *Duke University*.

Comparison of manifest content of TAT stories and series of dreams of the same subjects. HIRAM L. GORDON, *Roanoke VA Hospital and Duke University*.

An equation for schizophrenia? FRANK M. DUMAS, *Louisiana State University*.

Cards, sequences of cards, and repetition as factors in Thematic Apperception Test behavior. B. B. MASON and C. H. AMMONS, *University of Louisville*.

A study of handwriting and perceptual errors among children. IRENE ANDERSON and MARILYN DORSEN, *Newcomb College, Tulane University*.

The treatment of delayed speech by child-centered therapy. HENRY J. DUPONT, THEODORE LANDSMAN, *Vanderbilt University*, and MILTON VALENTINE, *Stanford University*.

Psychology Section C: Applied

STANFORD C. ERICKSEN, Chairman

An investigation and application of techniques of estimating grade reliability. SCARVIA B. ANDERSON, *Tufts College*, and CLARENCE W. SPENCE, *George Peabody College for Teachers*.

Development of an objective proficiency check for private pilot certification. STANFORD C. ERICKSEN, *Vanderbilt University*.

A statistical evaluation of the accident-proneness concept. D. J. MOFFIE, *North Carolina State College*.

An experimental approach to the functional relationship between "display" and "control." WILLIAM D. GARVEY and WILLIAM B. KNOWLES, JR., *Naval Research Laboratory, Washington, D. C.*

The validity of a generalized scale for comparing interests in natural science subjects. S. C. WEBB, *Emory University*.

The relationship between primary personal values and specific interest patterns of college students. ROBERT S. WALDROP, *Vanderbilt University*, and JULIAN C. STANLEY, JR., *George Peabody College for Teachers*.

Frequency of student problems at each college year level. DOROTHY G. PARK, *North Carolina Board of Public Welfare*.

A trial test battery for predicting freshmen engineering course grades. WILLIAM COLEMAN, *University of Tennessee*.

A method of item analysis based on the theory of sampling from a finite population. EDWARD E. CURETON, *University of Tennessee*.

Psychology Section D: Physiological and Comparative

WILLIAM BEVAN, JR., Chairman

The influence of behavioral factors on the incidence of audiogenic seizures in rats. WILLIAM J. GRIFFITHS, JR., *University of Mississippi*.

The distribution of scotopic sensitivity in human vision. ARTHUR J. RIOPELLE and WILLIAM BEVAN, JR., *Emory University*.

Effects of frontal lobe injury upon learning, re-learning and reversal of an H-maze habit by white rats. LOH SENG TSAI, *Tulane University*.

The significance of tactual stimulation in the behavior of new born puppies. W. T. JAMES, *University of Georgia*.

The learning ability of prepubescent rats subjected to alterations in body metabolism. D. R. KENSHALO, *Florida State University*, and C. H. SCHEIDLER, *Washington University*.

Psychology Section E: General

ELIZABETH DUFFY, Chairman

Placing precision and angle of regard. THOMAS M. STRITCH and ARTHUR J. RIOPELLE, *Emory University*.

Assumed roles of motivation as affecting rotary pursuit performance. H. P. SEELY and C. H. AMMONS, *University of Louisville*.

The values of science to the scientist. KEY L. BARKLEY, *North Carolina State College*.

"Verifying" hypotheses by verifying their implications. H. M. JOHNSON, *Tulane University*.

Friday Afternoon

Psychology Section F: Learning

SIGMUND KOCH, Chairman

An experimental investigation of cognitive factors as contrasted with non-cognitive factors in rote serial learning. W. G. WORKMAN, *Davidson College*.

The establishment of a secondary motive based upon the hunger drive. ELIZABETH ANN BICKNELL, DAVID S. SPERLING and JAMES S. CALVIN, *University of Kentucky*.

Learning the location of an irrelevant incentive when choices include relevant, irrelevant, and no apparent incentive. M. A. SCHMITZ, *University of Kentucky*.

Effect of backward conditioning on the properties of a stimulus associated with electric shock. JOHN A. BARLOW, *Duke University*.

Transfer of predifferentiation training in simple and multiple shape discrimination. MALCOLM D. ARNOULT, *Human Resources Research Center, Lackland Air Force Base, Texas*.

The effect of different types of warm-up activities on subsequent paired-associate learning as a function of level of practice. LELAND E. THUNE, *Vanderbilt University*.

An exploratory study of instrumental verbal conditioning. ERNEST MEYERS, *University of Kentucky*.

The relationship between meaning and familiarity. CLYDE E. NOBLE, *Human Resources Research Center, Lackland Air Force Base, Texas*.

Effects of practice conditions on aiming skill. E. HULLETT, A. J. ECKLES and R. B. AMMONS, *University of Louisville*.

Psychology Section G: Personality Measurement

BURKE MCG. SMITH, Chairman

"Comparable" paired-comparison items. JULIAN C. STANLEY, JR., *George Peabody College for Teachers*.

Curvilinearity in linearly restricted data. SUSAN W. GRAY, JULIAN C. STANLEY, *George Peabody College for Teachers*, and SCARVIA B. ANDERSON, *Naval Research Laboratory*.

Two contrasted measures of self-insight. WILLIAM D. SPEARS, JR. and JOSEPH P. ROBERTS, *George Peabody College for Teachers*.

An investigation on the use of the CVS abbreviated Wechsler-Bellevue Scale for Negro subjects. JAMES T. MORTON, JR., *Tuskegee VA Hospital*.

Age differences in children's reaction to toys. B. VON HALLER GILMER and KENNETH E. MOYER, *Carnegie Institute of Technology*.

An investigation into the diagnostic value of the Rosenzweig Picture-Frustration study. ROBERT L. BROWN and OLIVER L. LACEY, *University of Alabama*.

The reliability of a revision of Dymond's scales for the measurement of empathy. GRAHAM B. BELL, *Louisiana State University*.

Psychology Section H: Social

HAROLD G. MCCURDY, Chairman

Influences on the reliability and validity of LGD assessment. BERNARD M. BASS, STANLEY KLUBECK, and CECIL WURSTER, *Louisiana State University*.

A further exploratory analysis of factors associated with peer status among adolescent girls. JAMES E. GREENE, MARY E. WARDLOW, and R. TRAVIS OSBORN, *University of Georgia*.

A study of some factors related to social acceptance among children at a summer camp. SIDNEY M. JOURARD, *Emory University*.

Attitudes toward the church among college and university students in 1936 compared with attitudes of the same persons fourteen years later. ERLAND NELSON, *University of South Carolina*.

Projective study of racial awareness and associated feeling in young children. C. SCHRAMM and R. B. AMMONS, *University of Louisville*.

Annual Banquet

Presidential Address: Psychology's Growth and the Southern Society. JOHN B. WOLFE, *University of Mississippi*.

Saturday Morning

Joint Session

Symposium: The Measurement of Values

WILLIS MOORE, Chairman

L. L. THURSTONE, *University of North Carolina* (representing psychology).

EDWARD E. CURETON, *University of Tennessee*. Discussion of Professor Thurstone's paper.

CHARLES A. BAYLIS, *University of Maryland* (representing philosophy).

IREDELL JENKINS, *University of Alabama*. Discussion of Professor Baylis' paper.

Council

EDWARD G. BALLARD, MARION E. BUNCH, KARL M. DALLENBACH, STANFORD C. ERICKSEN, LEWIS M. HAMMOND, GERARD HINRICHS, WILLIS MOORE, HERBERT C. SANBORN (Honorary Member for Life), and officers.

Manuscript received May 16, 1952

PROCEEDINGS OF THE THIRTY-SECOND ANNUAL MEETING OF THE WESTERN PSYCHOLOGICAL ASSOCIATION

RICHARD KILBY, *Secretary*
San Jose State College

THE thirty-second annual meeting of the Western Psychological Association was held at the Hotel Californian in Fresno, California, April 25-26, 1952. The number of papers and symposia given was the largest in the association's history and reflects the rapid growth of the psychological population in the West. One hundred twenty-eight papers and six symposia were given in twenty sessions over the two-day period. A predominant number of the papers and symposia were in the clinical area, occupying eight sessions; approximately two sessions each were given to learning, experimental, personality, and statistics. Approximately 675 persons attended.

At the annual banquet on Friday evening, Robert Leeper gave the presidential address, "Rattie in a Crannied Box; or What?" He urged that, to discover fundamental factors even within small areas, we must use a vast range of situations rather than do "miniature-area research." Thus, to secure any precise understanding of learning, we must analyze learning situations in terms of the relatively specific problems involved, respectively, in the development of reward-expectation habits, punishment-expectation habits, sensory-organization habits, motor-discharge habits, etc. Organizational or cognitive theory emphasizes certain continuous functions, he said, as in Köhler's research on figural after-effects, but also stresses transformations and crystallizations which give marked discontinuities as well.

Special meetings and luncheons held in conjunction with the meeting were: the annual meeting of the California State Psychological Association; a luncheon for members of Psi Chi, sponsored by the chapters of Occidental College and Fresno State College; a luncheon for members of the Society for Projective Techniques; a luncheon for psychologists in private practice, sponsored by the Los An-

geles Society for Clinical Psychologists in Private Practice; and a regional luncheon and meeting of the Division of Clinical and Abnormal Psychology.

The Committee on Local Arrangements was composed of the following members of the Fresno State College staff: M. Bruce Fisher (chairman), Forrest D. Brown, John A. Buehler, Jr., Robert J. Howell, and Albert G. Wiederhold. The Program Committee members were Arthur Burton, Mason Haire, Joseph Luft, Bruce Fisher, C. W. Telford, and the secretary.

The following officers were elected for 1952-53: President, Ruth S. Tolman, VA Mental Hygiene Clinic, Los Angeles; Vice-President, Neil Warren, University of Southern California; Secretary, Richard Kilby, San Jose State College; Treasurer, Rheem Jarrett, University of California, Berkeley. The 1953 annual meeting will be held at Seattle, on the campus of the University of Washington, June 18, 19, 20.

In addition to selecting officers and place of next year's meeting, the following motions were passed at the annual business meeting. It was decided to continue publication, in the *American Psychologist*, of abstracts of papers given at the meeting. The Association accepted the invitation of AAAS to participate in its meeting to be held in San Francisco in December, 1954. In future elections a slate of at least three candidates for each office will be submitted. The following resolution regarding California's loyalty oath law (Levering Act) was adopted:

Believing that political tests and conformity oaths are an infringement on the traditional American rights of academic freedom; that by limiting and rigidly molding thought and inquiry such oaths hamper scientific progress, we, the members of Western Psychological Association in convention at Fresno, California, on April 25, 1952, declare ourselves in opposition to the enactment of Assembly Constitutional Amendments, Numbers 1 and 9, to the California State Constitution.

PROGRAM

Statistics I

ALLEN L. EDWARDS, Chairman

A factor analysis of the Thurstone Temperament Schedule. JAMES W. FRICK, *Santa Barbara College, University of California*. (Introduced by W. D. Altus)

Thurstone's *Temperament Schedule* was administered to 100 college women, aged 16 to 22. A centroid factor analysis yielded one group and three unique factors. This finding is not proof of fewer than seven factors since established measures of the presumed factors could not be included in the matrix. It is suggested, however, that the temperament schedules are still relatively impure.

A factor-analytic study of Navy reasoning tests with the Air Force Aircrew Classification Battery. PAUL R. CHRISTENSEN, J. P. GUILFORD, RUSSELL F. GREEN, and NORMAN W. KETTNER, *University of Southern California*.

As a means of identifying reasoning variance in the 22-test Aircrew Battery and of verifying results obtained in our first reasoning study, a factor analysis was made of the Air Force Aircrew Classification Battery and 32 reasoning and reference tests. Sixteen factors were extracted, rotated orthogonally, and identified.

A factor-analytic study of creative thinking abilities. J. P. GUILFORD, ROBERT C. WILSON, and PAUL R. CHRISTENSEN, *University of Southern California*.

Thirty-five experimental tests covering eight hypothesized abilities of creative thinking and 18 reference tests were factor analyzed. Sixteen factors were extracted and rotated. These were identified as verbal comprehension, numerical facility, perceptual speed, visualization, general reasoning, closure, word fluency, associational fluency, ideational fluency, originality, redefinition, adaptive flexibility, spontaneous flexibility, sensitivity to problems, a doublet, and a residual.

Some hypotheses and tests of evaluative abilities.

ALFRED F. HERTZKA, RAYMOND M. BERGER, and J. P. GUILFORD, *University of Southern California*.

Evaluation is defined as an awareness of the agreement of an object, situation, conclusion, or creation with a standard or criterion of suitability

or goodness. The factors judgment and speed of judgment have been isolated previously in this domain. At least two additional evaluation factors are hypothesized. A battery of 33 evaluation and 11 reference tests has been assembled.

The purification of factor tests. HAROLD BORKO, *University of Southern California*.

The original form of the Guilford-Zimmerman Spatial-Visualization Test was "impure" in that it correlated highly with both the visualization and spatial factors. A revised form of this test was developed and analyzed to demonstrate that it had a higher visualization and lower space loading than the original. The methodology for the purification of this test is presented.

Factorial variances associated with university grade point average. EDMUND E. DUDEK, *University of Washington*.

A factor analysis of a matrix of 30 variables, including Freshman grade point average for three quarters, sex, age, and Entrance test scores for 1,883 Freshman students; resulted in identifying eleven factors. Both oblique and orthogonal rotations were used. The orthogonal rotations were more useful in identifying the factors associated with grade-point average than were oblique rotations.

A non-parametric test for the reliability of the difference between two proportions. J. A. GENGARELLI and JOHN L. MICHAEL, *University of California, Los Angeles*.

The usual test of the null hypothesis applied in this situation requires an estimate of the proportion obtaining in the population from which the two samples are taken. The test described here is one which is independent of this estimate and contains only the difference between the two empirical values, the sizes of the two samples, the correlation (if any) existing between the proportions, and the desired confidence coefficient. The formula yields information as to whether, at the accepted confidence level, the two proportions are sample values from the same universe.

Statistics II

CLIFFORD T. MORGAN, Chairman

Avoiding spuriousness in biserial correlations used as coefficients of internal consistency. J. W.

HOLLEY and E. L. TAYLOR, *University of Southern California and Psychological Services, Inc.*

Mathematically exact formulas for computing item-test biserial and point-serial correlations corrected for spuriousness due to inclusion of the item in the total score are developed. These formulas require the same item values and total score statistics as those used in computing uncorrected coefficients, and little more computational work is required.

On the corrections of correlation coefficients for restriction of range. JOHN M. LEIMAN, *Human Resources Research Center, Lackland Air Force Base.*

An empirical check of the several equations for the Correction of Correlation Coefficients for Restriction of Range did not support the fundamental assumptions from which the equations were developed. The special cases when the corrections are appropriate are discussed.

A note concerning the reliability of point-biserial correlation. NORMAN C. PERRY, *San Jose State College.*

In this paper the origin and present usage of r_{pb1} are presented as an introduction. The need for some estimate of reliability is pointed out. Two solutions to this problem are presented: one exact but impractical, the other approximate but convenient.

The relationship of a point biserial coefficient of correlation to a phi coefficient calculated from use of extreme groups of various, but equal, proportions of a total criterion sample. WILLIAM B. MICHAEL, *The Rand Corporation*; NORMAN C. PERRY, *San Jose State College*, and J. P. GUILFORD, *University of Southern California.*

A formula is derived which relates a point-biserial coefficient to a phi coefficient calculated from use of contrasted groups of equal proportions. A technique is described by which the amount of systematic error in the formula may be ascertained. Tables are presented indicating percentages of error in formula estimates of point biserial coefficients for selected item-difficulty levels.

Increasing the purity of factor tests by item selection. J. W. HOLLEY, N. E. WILLMORTH, and E. L. TAYLOR, *University of Southern California and Psychological Services, Inc.*

The items of the Guilford-Zimmerman Temperament Survey were correlated with the ten factor tests. Items having high internal consistency and low correlations with the remaining tests were selected for the purified tests and scored on a new sample. Test intercorrelations were appreciably lower than for the original tests, while reliabilities were fairly comparable. The conclusion is that the method appears effective.

Industrial

DONALD A. RILEY, *Chairman*

Practitioner's plea to the professor or some needed research concerning supervisory development. PAUL C. BUCHANAN, *Naval Ordnance Test Station, Pasadena.*

Industrial personnel who organize supervisory training can obtain fairly complete information from the literature concerning traits desirable in supervisors and concerning factors in changing attitudes and developing skills. However, there are six areas in which research is conspicuously lacking. The specific problems in each of these areas are discussed with reference to practical training situations and to the literature.

A dual purpose attitude survey. BRYAN WILKINSON and JAMES H. MYERS, *Prudential Insurance Company, Los Angeles.*

The problem, devise an attitude survey to inform employees about company benefits while obtaining unbiased information on attitudes. Administration was on company time. Ninety-nine per cent of the employees returned usable questionnaires. When results were reported to everyone, information on benefits was given and company and community practices were compared. Much information, useful to management, was obtained.

Organizational effectiveness in two governmental agencies. ANDREW L. COMREY, *University of California, Los Angeles*, and JOHN M. PFIFFNER and HELEN P. BEEM, *University of Southern California.*

Under an ONR contract at the University of Southern California, studies were conducted separately in two governmental agencies. Criterion data were obtained for branch organizations in each agency. Questionnaires relating to supervisory practices, morale, and organizational procedures were administered within the branch or-

ganizations. These data were correlated with the criteria. Significant relationships with the criterion data were obtained.

Behavioral measure of criterion performance.

MAURICE CHORNESKY, *Human Resources Research Center, Lackland Air Force Base, San Antonio.* (Introduced by John M. Leiman)

Reliable measures in the behavioral domain are prerequisite to leadership study. An approach is presented wherein response modes of group members can be evaluated relative to a representative sample of life situations culled from a typically recurrent group. These evaluations can be regarded as *in situ* tendencies when behavior is defined as probability, as well as afford hypotheses for predictor development.

A comparison of the representativeness of check list rating and over-all ranking. JAY T. RUSMORE, *San Jose State College.*

Four groups, each consisting of 25 telephone operators, were rated with a check list and also ranked. Twelve additional cases were rated with the check list and with an over-all rating. Corrected for attenuation, the correlation between the results of the methods in both cases approached theoretical identity. This suggests that the methods were measuring the same variable and were equally adequate in terms of representativeness.

Introducing the Multi-Relational Sociometric Survey. MURRAY KAHANE and EUGENE TALBOT, *University of California, Los Angeles.*

The MSS (Multi-relational Sociometric Survey) is a new technique for studying interpersonal relationships within organizations by socio-matrix analysis. It permits measurement of the degree to which people understand, act in accordance with, and desire or reject relationships prescribed for them by the organization. Management's use of this technique facilitates the understanding of factors related to organizational effectiveness.

Learning I

C. W. TELFORD, Chairman

A test of Mowrer's two-factor theory using a response not evoked during the acquisition of anxiety. EUGENE EISMAN, *University of California, Los Angeles.*

The running response as the measure of anxiety usually used in testing the theory confounds the joint effects of reinforcement and anxiety. To avoid this the drinking response in the rat was used. Experimental results indicate that the two-factor theory is inadequate and that anxiety learning may be better accounted for on the basis of a monistic reinforcement theory.

A test of S-R vs. cognitive prediction of development of habits relative to stimulus components in discrimination learning. MORRIS ADERMAN, *University of Oregon.* (Introduced by Robert Leeper)

The hypothesis is, a response conditioned to a gestalt is also conditioned to the parts which make up the gestalt. The subjects were 60 control, 60 experimental Ss, 6-12 years old. The experimental group, after having been conditioned to cards containing an embedded K, responded to the K less than the control group, thereby supporting organizational theory.

An experimental study of the continuity-noncontinuity issue. KAREL J. LAMBERT, *University of Oregon.* (Introduced by Robert Leeper)

Sixty-one human Ss had to find the correct area pattern on the covers of children's books that contained various pictured objects and colors. Half the Ss had a two-book problem and half had a four-book problem. The experimental groups had the patterns reversed. Discriminably different stimulation was guaranteed. The results favor a noncontinuity theory of discrimination learning.

Implications of trial-and-error learning theory for combinations of mental sets in the solution of anagrams. IRVING MALTZMAN and LLOYD MORRISSETT, JR., *University of California, Los Angeles.*

It was assumed that the term *mental set* refers to behavior which can be accounted for in terms of the acquisition of habit strength by a class of stimuli for the elicitation of a particular class of responses. An implication concerning the combination of separate and compound habit strengths was tested with anagram sets. The results supported the basic assumption.

Response repetition as a function of interrupting a verbally rewarded series. G. RAYMOND STONE,

Human Resources Research Center, Hamilton Air Force Base.

Four groups of Ss (total $N = 400$) contributed data to four experimental conditions in which a modified Thorndikian serial verbal multiple-choice design with fixed incentives was employed. The results indicate that interrupting a rewarded series by an S-R item having no incentive response significantly reduces the amount of repetition not only to the specific item, but to the entire series.

The function of landmarks in human maze-learning.

DAVID E. MEISTER, *U. S. Navy Electronics Laboratory, San Diego.*

Thirty-six subjects learned visual mazes containing no landmarks and landmarks in choice points, correct alleys, and incorrect alleys. Choice-point and correct-alley landmarks proved more effective for learning the entire maze than incorrect-alley landmarks and the control maze. It is suggested that landmarks assume from the choice point the role of eliciting the correct response.

Influence of similarity of choice point and goal cues on discrimination learning. FRANK J. BAUER and DOUGLAS H. LAWRENCE, *Stanford University.*

Five groups of animals were trained and reversed on a simultaneous brightness discrimination with the following relationships between the brightness of choice point and corresponding goal box: (a) identical, (b) reversed, (c) randomly paired, (d) both goal boxes same as positive cue, and (e) both same as negative. Predictions in terms of stimulus generalization and secondary reinforcement failed to hold.

Learning II

G. RAYMOND STONE, Chairman

A search for subthreshold conditioning to four different auditory frequency values. R. C. WILCOTT, *University of California, Los Angeles.*

Numerous previous investigators have reported that an energy value that is below the absolute threshold as determined by a psychophysical procedure can be a stimulus. A search for subthreshold conditioning to four different auditory frequency values was made, and the results demonstrated no conditioning. Further experimentation is necessary before the validity of sub-threshold stimulation can be accepted.

The effect of the addition of a visual stimulus during the extinction of a conditioned bar-pressing response. JOHN V. HARALSON, *Los Angeles State College.*

After training rats to make a bar-pressing response, the response was extinguished: (a) In the presence of a dim light which the rat turned on each time a response was made. (b) In the presence of a dim light which remained lighted throughout extinction. (c) In the absence of the light stimulus. No significant differences were found between groups.

The acquisition of an instrumental response with whole and fractionated incentive. EDWARD L. WIKE and ROBERT L. BATTERTON, *University of California, Los Angeles.* (Introduced by Irving Maltzman)

The 1941 Wolfe-Kaplon runway study was repeated with rats. Rats receiving four peanut sections (F) were significantly faster than a group (W) rewarded with a whole peanut section of equal weight. Reward reversal led to a rapid, significant decrease in running time for the W-F group. The Wolfe-Kaplon findings were generally confirmed. The results were discussed in terms of Hull's system.

Transfer of training from discrimination learning to concept-formation. FRANK RESTLE, *Stanford University.* (Introduced by D. H. Lawrence)

Learning to discriminate drawings of faces on the basis of elements led to positive transfer on a concept-formation test based on the same elements. An equal amount of pretraining in which subjects reacted to faces as wholes had a slight negative effect in transfer to concept-formation. Transfer of "discriminated identifications" was suggested as an explanation.

Stimulus-response relationship as a dimension of task similarity-dissimilarity in transfer of training. FRANCIS E. JONES, *Human Resources Research Center, Hamilton Air Force Base.*

Transfer effect in a two-hand coordination task was investigated as a function of degree of reversal of within-task S-R relationships. Utilizing equated groups, five degrees of reversal were sampled: no-reversal, $\frac{1}{4}$ -, $\frac{1}{2}$ -, $\frac{3}{4}$ -, and full-reversal. When effect was plotted against reversal, the function obtained approximated a negative growth function,

but with all values positive. The highest value was at no-reversal.

The individual differences factor in proactive and retroactive transfer. PAUL J. HOFFMAN, WILLIAM R. GOODWIN, and DOUGLAS H. LAWRENCE, *Stanford University*.

An attempt was made to determine the relationship between individual differences in initial performance and degree of original and interpolated learning, as related to proactive and retroactive transfer. Results indicated that a large portion of the predictable proactive and retroactive transfer effects can be attributed to initial status and to interactions involving initial status and degree of learning.

The effect of homogeneity of items on immediate recall. MONCRIEFF SMITH, *University of Washington*.

A comparison was made of the free recall of a 15-unit list of adjectives when the words were presented alone and when they were illustrated by a stick-drawing. On the first list presented, the comparison favored the illustrated words, but this advantage disappeared in subsequent lists. The results were interpreted in terms of intralist similarity.

Experimental I

DONALD W. TAYLOR, Chairman

The relation of convergence and elevation changes to judgments of size. THOMAS G. HERMANS, *University of Washington*.

Observers ($N = 49$) indicated with an adjustable aperture judgments of size of a standard aperture while variations in convergence and elevation were effected. Judged size decreased with increase in both variables, and an analysis of variance showed both to be significant. The author relates these data to the problems of size constancy and the moon illusion.

The effect of optical eccentric chromatic distortion on the perception of depth. GEORGE E. MOUNT, *University of California, Los Angeles*.

Differences in the magnitude of a type of chromatic distortion for the two eyes will result in the production of disparate images for adjacent forms having different spectral distributions. Differences are found in the magnitude and direction of distortion between individuals and for different illumina-

tion levels. The effect may account for the perception of hues in depth under certain conditions.

The effect of reward on objectivity of perception. IRA ISCOE, *University of Texas*.

Two groups of boys and girls (preadolescent) saw silhouette slides (exposed for .02 sec.) of a competing boy and girl making equal numbers of errors. Subjects recorded their choices after each scene. Estimation of errors was made at conclusion of showing. Reward did not influence accuracy of immediate estimate. Own sex bias was significant in final estimate.

The influence of identifying words on the recognition of ambiguous forms. EDWARD W. GELBREICH, *San Diego State College*.

The Carmichael, Hogan, and Walter study was repeated using new forms and a recognition test to discern the influence of words. Tests of significance between control and experimental conditions do not permit agreement with expected previous results. Matched groups were used. Over 80% of the perceived forms were correctly recognized in all conditions. The results indicate no decided influence of words upon recognition of perceived forms.

Perceived motion. D. H. LAWRENCE and R. D. EDGREN, *Stanford University*. (film)

This film is intended to present some of the experimental conditions described by J. F. Brown in "The Visual Perception of Velocity" (1931). Objects moving at a standard speed are paired with objects moving at five successive variable speeds. In various scenes, the effects of distance and change of size of objects and rectangular backgrounds are shown. The purpose of showing this film would be to get comments and criticisms. It has not been available long enough for the compilation of extensive data. If it succeeds in measuring the factors which Brown measured, it may be used as (a) a demonstration film for perception classes and (b) a means of studying the visual perception of motion in large groups.

A possible statistical basis for a detection decision by a human operator. C. A. SHEWMAKER, *Human Factors Division, U. S. Navy Electronics Laboratory, San Diego*. (Introduced by Arnold M. Small)

This paper is a report of attempts to correlate physical and statistical characteristics of a par-

ticular type of visual stimulus with the empirical probability of detection of a specific event occurring in the stimulus.

The psycho-acoustic research facility at the U. S. Navy Electronics Laboratory. C. E. CUNNINGHAM, *U. S. Navy Electronics Laboratory, San Diego*. (Introduced by Arnold M. Small)

A Psycho-acoustic Research Facility has been developed at the U. S. Navy Electronics Laboratory which features fully automatic programming, timing, and test control. Five large relay-type racks house many types of audio equipment which may be interconnected as desired and programmed into a listening test. Versatility and automaticity make this a nearly universal psycho-acoustic research facility.

Masked auditory threshold for a pure tone presented randomly at four frequencies. PAUL I. ATKINSON, *U. S. Navy Electronics Laboratory, San Diego*. (Introduced by Arnold M. Small)

The aural threshold for a pure tone masked by thermal noise was compared for two conditions: (a) test tone presented at fixed frequency, (b) test tone randomly presented at each one of four predetermined frequencies. No evidence was found to indicate any significant difference between the thresholds for the two conditions.

The measurement of visual perceptual latency as an index of retinal interaction effects in the human fovea. PAUL G. CHEATHAM, *U. S. Navy Electronics Laboratory, San Diego*.

Perceptual latency was measured for three trained Os by the masking method, under five conditions designed to produce foveal summation or inhibition. Only summation occurred as indicated by a significant shortening of perceptual latency. Significant inhibition was not produced. Perceptual latency measurements provide a sensitive index of the temporal characteristics of retinal activity.

A test of the validity of the Elsberg method of olfactometry. F. NOWELL JONES, *University of California, Los Angeles*.

Blast-injection thresholds were obtained for three levels of odor concentration for each of two substances. Since concentration made no significant difference in measured threshold, it is concluded that Elsberg thresholds are aerodynamic rather than odorous.

Experimental II

M. BRUCE FISHER, Chairman

Methodological considerations in the use of electrodermal data. WILLIAM W. GRINGS, *University of Southern California*.

Three different manifestations of electrical skin activity (DC resistance, AC impedance, and potential) were compared with reference to electrical properties, interrelations, and distribution characteristics. Data were presented showing skin impedance as a function of frequency, resistance versus reactance components, conductance as a function of current; as well as interrelations of basic measures, frequency distributions, and differences among electrode locations.

Muscular activity during relaxation. ROBERT B. VOAS, *University of California, Los Angeles*.

The level of muscular activity as reflected in the electromyogram was measured in 37 individuals under instruction to relax completely. Seven muscle groups from the face, arm, and leg were measured twice, at least a week apart. Patterns characteristic of given individuals were found. The frontalis muscle gave a high level of activity in all subjects.

A hypnoidal degree of relaxation and the recall of completed and interrupted tasks. J. WESLEY SANDERSON, *University of California, Los Angeles*.

Twenty subjects were interrupted half of the time while writing captions for cartoons. Ten subjects underwent progressive relaxation procedures between two recall efforts. A reminiscence effect occurred for group E, at the .02 level, largely contributed by completed items. If completed items are considered more meaningful, results support the hypothesis that relaxation enhances the recall of meaningful material.

Effects of cortical lesions upon the onset of hoarding activity in rats. JOHN S. STAMM, *California Institute of Technology*.

Fifteen adult male rats were used; 6 as controls, 5 with large lesions in the frontal, and 4 in the caudal cortical regions. Half-hour daily hoarding trials were given for 41 days. Histological examinations showed lesions from 25 to 60%. Hoarding was shown by all controls, 4 of the frontal, and only 1 of the caudal rats. The con-

trol rats consistently hoarded more pellets than did the experimental ones; although the differences were not very large.

Infantile deprivation and adult social behavior in the white rat. RICHARD A. LITTMAN, *University of Oregon*.

Albino rats weaned, divided into two groups; E's immediately given fifteen day irregular feeding schedule; C's on ad libitum schedule. One hundred and forty days later individually trained in Skinner box. Then pairs run, one E and C to a pair. Analyzed for relation of infantile deprivation to paired response frequencies. No simple relation; E's showed anxiety-like behavior.

Primary reinforcement as need reduction. CALVIN W. THOMSON, *New Mexico College of A. and M. A.*

The adequacy of the hypothesis that primary reinforcement is biological need reduction was tested in the following manner: Surgically rendered ageusic and anosmic rats were made sodium deficient and trained on a single-unit T maze which contained saline as an incentive. Normal animals were similarly trained as a control. The results supported the hypothesis that need reduction can support learning.

Köhler's satiation theory and individual differences in problem solving. JACK FOX, *University of California, Los Angeles*. (Introduced by Irving Maltzman)

The hypothesis was tested that the satiation theory—derived from perception—is applicable to problem solving and that individual differences in satiation will express themselves in curvilinear correlation of individual differences in rates of figure-ground reversals (vase-faces figure) and rates of problem solving with anagrams. Eta (.66) and curvilinearity were significant beyond .001 level. There were 224 subjects.

A preliminary investigation of rhythm and tracking. ROBERT M. GOTTSANKER, *Santa Barbara College, University of California*.

Study was made of three aspects of rhythmic performance to determine which, if any, account for the superiority of rapid over slow handwheel rotation in tracking. Rapid, discrete stimuli and effort patterns did not improve performance when slow rotation was retained. However, repetitive

key tapping gave the same kind of results previously found for rapid rotation.

Social

DAVID KRECH, Chairman

Class consciousness in a small western city. S. STANSFELD SARGENT, *Barnard College, Columbia University*.

New interview techniques, direct and indirect, were used to disclose awareness of class differences and class membership, in a Pacific Coast city of nearly 20,000. The findings were supplemented by data on residence and club membership in relation to occupation. Results show less class consciousness and class distinction than in Eastern and Mid-western communities of comparable size.

A study of cheating on a university campus. BERNICE R. EISMAN, OKELLAN N. GRANT, CAROLE C. HORN, VERNE J. KALLEJIAN, JAMES Q. KNOWLTON, and JACK K. WEINSTOCK, *University of California, Los Angeles*.

Data, in the form of responses to a questionnaire regarding cheating at the University of California, Los Angeles, were subjected to analysis. Five major variables were isolated and specific relationships among them were hypothesized and tested. Significant relationships, and their directions, were determined between cheating behavior, attitude toward cheating, estimation of the amount of cheating done by others, suggested punishments for cheating, and maturity indices such as age, self-support, etc.

A study of age relationships by hypothetical situations. ARNOLD S. GEBEL and GEORGE F. J. LEHNER, *University of California, Los Angeles*.

A questionnaire study using hypothetical situations was administered to a group of college students for determining the relationships between own age and such factors as estimated ideal age of self, parents, siblings, spouse, friends, etc. Summary of findings will include discussion of possible dynamics of age relationships, their implications for relations of self to past, present and future, and their possible clinical use.

Attitudes of signers and non-signers of the University of California's loyalty oaths. BRITOMAR J. HANDLON and LESLIE H. SQUIER, *University of California, Berkeley*. (Introduced by David Krech)

Fifty University of California students (Lecturers, Research and Teaching Assistants) were interviewed and given the CPOS Authoritarianism scale. Among other results, non-signers had a broader interpretation of the function of a university, gave a more rigorous interpretation of academic freedom, and scored significantly lower on authoritarian attitudes.

Frames of reference and pluralistic ignorance.
WALTER KAPLAN and RICHARD A. LITTMAN,
University of Oregon.

Jewish and gentile fraternity students were given two forms of a "projective" questionnaire. Questionnaire dealt with problem situations involving Jews; subjects were to impute thought to either a Jewish or gentile character. Similarities and differences in responses of Jews and gentiles were a function of both the situations described and the character to whom statements were imputed.

Measuring non-conforming behavior by the direction of perception technique of attitude measurement. RAYMOND E. BERNBERG, *Los Angeles State College.*

The direction of perception technique was used to measure non-conforming behavior. Groups of boys, median and modal age, 18 years, differing in intelligence, socioeconomic, and cultural background took two forms of the test. An analysis of item distribution disclosed evidence for the basic assumption of direction of perception. This and other evidence provides normative data for further research.

The discrimination of sex differences by young children. ALLAN KATCHER, *University of Washington.*

Two hundred sixty-six children, ages 3-9, were presented with segments of drawings, illustrating clothed and nude adults and children. Subjects were required to identify sex appropriate cues when presented with a pair of segments, one of each sex. Sex-differentiating characteristics of clothing were most easily identified, followed in order by hair, genitals, and breasts.

Personality I

WILLIAM D. ALTUS, Chairman

Self-organization as a factor in the performance of selected cognitive tasks. RAVENNA MATHEWS,

CURTIS HARDYCK, and THEODORE R. SARBIN,
University of California, Berkeley.

A study was done on the relation of certain personality organizations to (a) characteristic ways of judging and (b) types of response to motor conflict. Prior to the experimental procedures, the subjects were classified into 3 groups on the basis of MMPI profiles and predictions made for each group. The predicted responses were observed at .05 confidence levels.

Compulsivity as a determinant in selected cognitive-perceptual performances. B. G. ROSENBERG,
University of California, Berkeley.

The investigation concerned itself with the cognitive-perceptual characteristics of compulsive neurotics. It was concluded that compulsives err more systematically in the direction of symmetry than normals. No significant differences in persistence toward closure between normals and compulsives occurred. Compulsives possess a higher relatedness to the two perceptual variables, symmetry and closure, than do normals.

Global aspects of personality and perception.
MARVIN SPIEGELMAN, *University of California, Los Angeles.*

Hypothesis: Individual differences in perception of a motion picture are a function of global aspects of personality. Rorschachs were administered to 35 subjects who had seen a film and had answered open-ended questions about their perception of it. Four clinical experts were able to match the Rorschachs and perceptual protocols at the .056 and .001 levels of confidence.

The measurement of levels of aspiration. JOHN R. HILLS, *University of Southern California.* (Introduced by J. P. Guilford)

A normative measuring instrument which will evaluate the levels of aspiration in specific areas of striving has been administered along with a typical goal-discrepancy measure to a group of male, lower-division students. Results indicate that an individual's aspiration level in various areas is not necessarily the same but that the goal-discrepancy score may be a fairly good over-all measure.

Some personality correlates of independence of judgment. FRANK BARRON, *University of California, Berkeley.*

Persons who showed independence of judgment in an experimental social situation (devised by

Solomon Asch) in which there was strong pressure from their peers to conform to a false group opinion were studied through the use of objective personality tests. As compared to those who yielded to group opinion, they proved to be more complex and intelligent individuals, and they cathected such values as inventiveness, logical thinking, open-mindedness, and idealism. Yielders were more traditionalist, ingroup-oriented, practical-minded, and extracceptive.

Level of aspiration as a measure of delinquency proneness. RUSSELL N. CASSEL, *Parks Air Force Base*, and ROBERT VAN VORST, *Nelles School for Boys, Whittier*.

The Cassel Group Level of Aspiration Test (CGAT) was administered to 815 individuals from "in-prison" and "out-of-prison" groups. Comparisons on test indices were made between members of the two groups. The mean D-Score discerned reliably at the 1% level of confidence between members from the two groups.

Peer status as related to measures of personality in the fifth grade. ANN NOWELL, *San Diego County Probation Department*.

The present investigation was primarily a methodological one of utilizing sociometric, psychometric, and projective measures of personality on thirty elementary school subjects to ascertain which measures held most promise for research into the interwoven pattern of "attributes of personality" and "status."

Empathic understanding operationally defined in terms of the screening-diagnostic interview. THOMAS G. MACFARLANE, *University of California, Los Angeles*.

An integrated conceptual definition of empathic understanding is organized in terms of Self, Other, and Relationship. Further differentiation into twelve categories is made, each category being defined by statements referring to the patient's experiences during the screening-diagnostic interview. Immediately after the interview, the interviewer attempts to sort the statements as the patient sorts them, providing a measure of empathy.

Personality II

S. STANSFELD SARGENT, Chairman

Preliminary research on the specialization level scale of the Strong Vocational Interest Blank for

men. MILTON G. HOLMEN, *Stanford University*.

The specialization level scale was developed to differentiate between medical specialists and physicians in general. Preliminary research indicates that it will also differentiate between occupational groups within the areas of physical science, social science, and accountancy. It also appears to differentiate between chemists with PhD's and those without this degree, but not between successful and unsuccessful candidates for the MBA degree.

A method of introducing psychology and psychiatry to first-year medical students. WILLIAM H. BROWN and IJA N. KORNER, *College of Medicine, University of Utah*.

The paper describes the techniques used to introduce first-year medical students to their own dynamics and, in turn, to provide them with a better basis for observing and understanding the behavior of others.

Certain personality characteristics of potential hypertensives. L. G. CARPENTER, JR., R. E. HARRIS, M. B. FREEDMAN, M. SOKOLOV, and S. P. HUNT, *University of California School of Medicine, San Francisco*.

It was demonstrated that young women having blood pressure patterns associated with the development of hypertension in later life are characterized by a personality constellation different from normals. This was done by inducing psychological stress in meaningful social situations and making blind analyses of pre- and poststress test patterns, evaluation of behavior during stress, and a psychiatric interview.

The self-concept and feelings toward others as expressed by hospitalized psychotic patients. STEPHEN S. RAUCH, *San Francisco State College and Permanente Psychiatric Clinic*, and MARY DARBY RAUCH, *Permanente Psychiatric Clinic*.

Attitudes toward Self, attitudes toward others and toward authority figures were indirectly expressed by 58 hospitalized male schizophrenics, and rated on eleven dimensions by trained independent judges. The average reliability of .71 indicates that psychotics do communicate their basic feelings with consistency. A higher relationship was found between Self and Authority attitudes than Self and Others attitudes for this group.

Developmental study of the relation of family variables to children's intelligence. MARJORIE P. HONZIK, *University of California, Berkeley*.

In a representative sample of 250 children, socioeconomic status, parents' education, and ratings of mothers' intelligence showed an increasing relation to the children's mental test scores between 21 months and 18 years. No significant age trends were noted when ratings of marital adjustment or parental attitudes were related to the children's intelligence. The implication of these findings is discussed.

Subjective size in personality and in perception.

BETTY L. KALIS and ROBERT E. HARRIS, *University of California, Berkeley and San Francisco.*

A perceptual experiment maximizing autistic factors and minimizing ordinary environmental or constancy cues was analyzed to determine the extent of covariation with personality factors. The tendency to perceive objects as small or large appeared significantly related to congruity vs. non-congruity of self-other perception. The task seems to tap enduring subjective organizational modes, revealed in the absence of familiar cues.

Personality factors in choice of nursing. ALMA P.

BEAVER, *Santa Barbara College, University of California.*

Eighty-six student nurses and a controlled group of liberal arts education majors were given the MMPI. An item analysis identified 66 items which differentiated the groups, the critical ratio of the difference being greater than 2.00 for all items. Four factors tend to characterize the nurses: conventionality, absence of hypochondriasis, freedom from neurosis, and a social-sexual factor.

The relationship between the judged desirability of a trait and the probability that the trait will be endorsed. ALLEN L. EDWARDS, *University of Washington.*

A group of subjects judged the desirability of 140 personality trait items. Scale values of the items were found by the method of successive intervals. Another group of subjects responded to the items as in an ordinary personality inventory. The frequency with which an item was endorsed was found to be a function of the judged desirability of the item.

Personality correlates of Q-L differentials for college males. WILLIAM D. ALTUS, *Santa Barbara College, University of California.*

Q-L discrepancy scores on the ACE for 200 college males were used for analyzing personality differences as revealed by the group MMPI. The

high Q men were significantly more masculine, told significantly more "lies." Much less interested in reading, the high Q men also evinced less poise and pleasure in interpersonal relations. No significant differences in personal adjustment were noted.

Personality III

WILLIAM B. MICHAEL, Chairman

Self-percepts of stutterers measured by the W-A-Y technique. SEYMOUR L. ZELIN, JOSEPH G. SHEEHAN, and JAMES F. T. BUGENTAL, *University of California, Los Angeles.*

Using the W-A-Y technique, an analysis was attempted of the effect of stuttering upon self-perceptions. Thirty stutterers were compared with one hundred and sixty non-stutterers along frequency of use of such content categories as group identification, positive-negative affect, and recognition of themselves as stutterers. The stutterers were divided by sex and their responses compared along four indices.

An interpretation of a general factor on the MMPI.

GEORGE S. WELSH, *Veterans Administration Hospital, Oakland.*

Factor studies have identified a first MMPI factor: "general maladjustment." Four estimates of this factor are highly intercorrelated: (a) highest scales Pt , Sc ; (b) $(Pt + Sc - 2K)$; (c) number of scales ≥ 70 ; (d) items scored on three or more scales. From these, a scale has been developed. The factor seems less one of maladjustment than of "introversion"; it is common to various populations.

The therapeutic value of recognition. W. E. PAYNE, *Coeur d'Alene, Idaho.*

This is an attempt to isolate the significant common factors in group behavior control and individual emotional adjustment. The procedure consisted of discussion of representative experiments in group behavior control and individual emotional adjustment by means of adapted subject recognition. It is concluded that a large part of child delinquency, children's emotional difficulties, and adult pathological behavior appears symptomatic only of a deficiency of recognition.

Analysis of dream images by means of a questionnaire. ERNEST BELDEN, *U. S. Army Hospital, Fort Ord.*

Fragmentary dream images of a normal male group were tabulated and compared with another normal group. Results suggest reliable consistencies between the two samples. A comparison of dream images of a normal and a psychiatric group by means of item analysis suggests that such things as frequency, recurrence and experienced fright, and unpleasantness differentiate between the two groups.

A "Moral Maturity Scale" applied to the statements of forty-two members in group psychotherapy projects at the California Institution for Men, Chino. DAVID D. EITZEN, *University of Southern California*.

Assuming that "crime" is a form of overcompensation for feeling handicapped to deal with life in terms of personal standards of self-worth, the tape recorded expressions of attitudes and behavior as expressed in group psychotherapy sessions (8 men per group) were plotted on a scale ranging from courageous and creative adjustment to that which is defensive, evasive, and withdrawing.

Relationships of parental domination to the personality of college students. WILLIAM M. MCPHEE and FLOYD W. STETTLER, *University of Utah*.

The California Tests of Personality, completed by 147 unmarried college students, were dichotomized according to whether or not the students had been dominated by their parents. Those individuals who had been dominated tended to be more poorly adjusted to life's situations than their associates who were less dominated.

The conditioned response and nocturnal enuresis. JOSEPH D. WEENER, *The Enurton Company*. (Introduced by J. F. T. BUGENTAL)

A questionnaire was sent out to 475 families whose children had used a modification of the Mowrer conditioning apparatus in the treatment of enuresis. Since replies were still being received at this writing, only a preliminary survey of the results could be made. It appears that in a great majority of the cases the problem was successfully alleviated, thus supporting Mowrer's contentions.

A study of the anxiety level of volunteers and non-volunteers. B. LEBOVITS and JACK FOX, *University of California, Los Angeles*. (Introduced by IRVING MALTZMAN)

Data of a previous experiment were evaluated to see if the anxiety level of subjects violates the as-

sumption of random representative sampling. Specifically, volunteers vs. non-volunteers, and abnormal psychology classes vs. general psychology classes were compared on an anxiety scale. The results show that the former approach significance with a two-tailed test, and are significant with a one-tailed test.

A factor-analytic study of traits of military leadership. JASPER W. HOLLEY, *University of Southern California*.

A battery of 38 personality tests covering thirteen hypothesized traits of military leadership were administered to a military population. A factor analysis of these data yielded eleven identifiable factors. Three previously isolated factors were verified on a military population, two others were redefined, while six new factors of kindness, selectiveness, competitiveness, religion, conventionalism, and discipline were added to the list of known traits.

Psychotherapy

CLARE W. THOMPSON, Chairman

Roles patients take in group therapy; a factor-analytic approach. F. HAROLD GIEDT, *Veterans Administration Mental Hygiene Clinic, San Francisco*.

This is an attempt to identify clusters of persons similar in their group behavior by correlation technique. Pairs of therapists check as true or false 100 statements of group behavior for 50 patients. From their pooled descriptions of each patient tetrachoric correlations between all patients are analyzed for clusters. The unique characteristics of persons in each cluster define their role.

The use of group-therapy for cases of traumatic war neurosis. HENDRIK LINDT and MIRIAM MILLS, *Veterans Administration Mental Hygiene Clinic, Los Angeles*. (Introduced by JOSEPH SHEEHAN)

After first having been separated from their family group by entering military service, many combat veterans experienced again either separation from or disintegration of their wartime group. The resultant loss of group morale was often a factor in precipitating a traumatic neurosis for which at least in part a therapy-group provided an appropriate corrective emotional experience.

Changes in personality test measures resulting from participation of college students in group-centered psychotherapy. LAWRENCE BARR, *El Camino College*.

The study was designed to determine the effects of group-centered psychotherapy on the social adjustment of college students. Tests included in the pretherapeutic and posttherapeutic batteries were the Minnesota Multiphasic Personality Inventory, Minnesota Personality Scale, and Thematic Apperception Test. Significant reductions in defensiveness and increased social adjustment scores were observed among experimental subjects. Controls showed no significant changes in retesting.

Experiment in teaching and testing psychodramatic techniques. ANNA B. BRIND, ROBERT B. HAAS, and NAH BRIND, *California Institute of Psychodrama, Los Angeles*.

During winter semester 1951-52 The California Institute of Psychodrama conducted a class in role playing and related techniques. The students were social workers and youth leaders. Each technique learned and discussed in class setting was then applied by a volunteer group in actual agency work, and then reported on and fed back at one of the following sessions. Group summarized methods and achievements as very satisfactory.

Explicit analysis of topical concurrence in diagnostic interviewing. J. F. T. BUGENTAL, *University of California, Los Angeles*.

Two experienced clinicians each briefly interviewed four patients of varied nosology. Typescripts of these eight interviews yielded 954 thought units. Each unit was studied for its agreement with or divergence from the topical content (subject matter) of the preceding speaker's statement. The findings are studied for interviewer differences and consistencies and for patterns of response to different concurrence levels.

Mutual (group) therapy for exhibitionists on probation. JOHN W. HOWE, *Meyers Clinic, Los Angeles*.

Seventeen men, some of their wives, man therapist, woman therapist, and a few friends meet one night a week. How were we brought up to believe and feel about life, sex, success, ourselves? How did this lead to our personalities, symptoms—especially exposure? Our similarities, differences? How can we help ourselves; our children; other exhibitionists? Two years' results: one known relapse.

Fear-reduction during stuttering in relation to conflict, "anxiety-binding" and reinforcement.

JOSEPH SHEEHAN, *University of California, Los Angeles*.

The occurrence of stuttering reduces the fear which elicited it. Successful avoidance builds up anxiety which the stuttering dissipates. Like tics and compulsions, stuttering "binds" anxiety and reduces it. During the block there is sufficient reduction in fear, avoidance, and outward tension to resolve the conflict, permitting release of the blocked word. This reinforces and maintains the symptom.

Non-formal training of counselors; a professional question. J. GUSTAV WHITE, *Chapman College*.

Some observations and convictions regarding the obligation of professional psychologists to initiate and constantly guide non-professionals; based on two decades of college teaching and private practice of psychological counseling. Also an outline of the minimum information and training requisite for amateur counseling of puzzled persons.

Psychodiagnostics I

JOSEPH LUFT, Chairman

Projective measurement of hostility. SOLOMON DIAMOND, *Los Angeles State College*.

Multiple-choice judgments of what "most people" think characteristic of various occupational groups yield an hostility score. Fantasies in which House, Tree, and Person must all be gifted with speech are qualitatively rated, as validation. Sex differences in scores and themes are noted. Symbolic roles of House and Tree are discussed. Productions of individuals seen in counseling are also validating.

Ambiguity of picture and personality factors in fantasy production elicited. SIDNEY W. BIJOU, *University of Washington*, and DOUGLAS T. KENNY, *University of British Columbia*.

The hypothesis of a direct relationship between the ambiguity properties of elicited TAT pictures and extent of personality factors revealed in the fantasy elicited was tested. Two measures of stimulus ambiguity were related to scaled values of personality factors judged to be contained in the fantasy productions.

The semantic validity of TAT interpretations. BEVERLY FEST DAVENPORT, *University of Southern California*.

Interpretative statements drawn from typical TAT interpretations were studied in order to dis-

cover whether or not they could be used to discriminate between individuals with any degree of reliability, and how factors such as ambiguity and universality might influence the interpretative process. Observations were made concerning the habits of interpreters in using these statements.

The Auditory Apperception Test. LOUIS C. BERNADONI and THOMAS S. BALL, *Branch United States Disciplinary Barracks, Lompoc*. (Introduced by HARRY F. PERCIVAL)

After being presented with sound effects in either continuous or interruptive sequences, the subject is asked to integrate the stimuli as the elements of a dramatic story and thus projects his personality. The test's unique qualities lie in its probing of auditory imagery with exceptionally vivid stimuli in a temporal sequence and in the relative simplicity of interpretation.

Rorschach indications of delinquent characteristics. ANNA Y. MARTIN, *Highlands University*.

Personality Structure: Of the 85 Rorschach protocols studied, 45% show a pattern of introversion; 42% show personality development to be in a transition stage. **Intellectual Aspects:** Range, from mentally deficient to superior; 58% average; 26% dull normal. **Emotional Aspects:** (a) Lack of constriction, (b) inner control greater than outer control, (c) few signs of anxiety or of tension, (d) signs of compulsion, (e) no signs of neuroses.

The Rorschach examination and general intelligence. SYDNEY SMITH, *Arizona State College*.

The Wechsler-Bellevue and the Rorschach examination were administered to 60 subjects. Specific Rorschach scoring factors were correlated with the various subtests on the Wechsler-Bellevue to determine the extent to which the Rorschach examination can predict psychometric intelligence. Whole responses, original responses, and the productive capacity of the subject appeared to be the most significant indicators of intelligence.

Hypnosis as a projective technique. WARREN W. WILCOX, *Portland State Extension Center, Portland*.

Hypnosis has been employed as a projective technique with the aid of a tape recorder. Hypnosis was induced by a hypnotic record which also presented the subject with an ambiguous unstructured situation which called for elaboration. Responses were recorded and furnish a basis of comparison with unhypnotized subjects. Study of 25 subjects

reveals that unconscious material is readily available by this method. Hypnosis is a versatile tool as a projective technique, but requires standardization.

Communication and rapport in clinical testing.

DAVID COLE, *Occidental College*.

Traditional approaches to rapport building in clinical testing have been via the means of praise and encouragement. This author has applied the recent findings in psychotherapy to build a testing procedure wherein the aim is to communicate to the subject that his feelings regarding the test are recognized and appreciated. Successful application in a variety of testing situations is reported.

Psychodiagnostics II

ARTHUR BURTON, *Chairman*

The conventions of intelligence testing. ALICE W. HEIM, *Psychological Laboratory, Cambridge, England, and Visiting Fellow, Stanford University*.

The suggestion is made that contemporary psychometricians tend to oversimplify the psychological issues involved in intelligence testing. Evidence for this view is offered from three of the writer's experiments, the first on practice effects, the second on "speed versus power," and the third on adaptation to level of difficulty. All these indicate that flexibility of interpretation may prove more fruitful than the current rigidity.

The relationship between the F scale and intelligence. THOMAS S. COHN, *Santa Barbara College, University of California*.

An investigation of the relationship between F-scale items and intelligence was carried out using two college samples. Item analysis revealed that the F-scale items may be interpreted in terms of susceptibility to clichés rather than to deep-rooted personality traits.

The relationship between diagnoses and extreme subscore deviations on the Wechsler-Bellevue. STANLEY BENSON and KATHERINE BRADWAY, *Stanford University Hospitals*.

To assess the relationship between extreme Wechsler subtest scores and diagnosis, chi-square comparisons were made of extreme mean deviations, dichotomizing the deviations as belonging or not belonging to each of eight overlapping diagnostic categories. The results indicate the more sensitive

subtests and the degree of certainty with which certain differential diagnoses can be made.

A non-intellectual test of intelligence. HARRISON G. GOUGH, *University of California, Berkeley*.

A special pool of personality inventory items having theoretical and/or intuitional relevance to the assessment of intellectual efficiency was assembled. A scale was developed by checking the items empirically against standard measures of intelligence in four high school samples. Eight cross-validated sub-samples ($N = 1,121$) yielded a median r of .475. Two graduate student samples gave coefficients of .42 and .44.

Relationship of WISC scores to group test measures of intelligence and reading. GRACE THOMPSON ALTUS, *Santa Barbara County Schools*.

The Wechsler Intelligence Scale for Children (WISC), California Test of Mental Maturity (CTMM), and Progressive Reading Test were given to a representative sample of 55 junior high students. The correlation between WISC and CTMM IQ's was .81, between WISC verbal expectancy grade and reading grade, .83 holding age constant. Validity of the WISC in comparable school settings seems indicated.

A rationally constructed MMPI scale to measure dependence. LESLIE NAVRAN, *Stanford University*.

The construction of a 57-item Dependence Scale for the MMPI is described. Initial findings ranked samples of graduate students, normals representing the general population, and neuropsychiatric patients from least to most dependent, in the order named, with significant differences between each group. A civilian ulcer group scored significantly higher than a naval ulcer group. Theoretical implications are discussed.

Delinquent vs. nondelinquent performance on the Porteus Qualitative Maze Test. RICHARD F. DOCTOR, *Stanford University*. (Introduced by C. L. WINDER)

The Maze Test was given to 60 delinquent and 60 non delinquent boys. The records were scored for qualitative errors, i.e., cutting corner, crossing line, etc. The delinquents' mean was 45, nondelinquents' 25. This difference is highly significant, yielding a critical ratio of 5. Porteus' claims were corroborated, and further standardization is justified.

A comparison of the clinical data yielded by a test of symbol arrangement with other findings of two attempted suicide patients. THEODORE C. KAHN, *U. S. Air Force Hospital, Parks Air Force Base*.

Forty objectively defined clinical factors were identified by 5 tests: 37 on the Symbol Arrangement, 25 on the Rorschach, 17 on the MTAT, and 12 on other tests. There was general agreement among test findings except that 13 factors were identified on the Symbol Arrangement Test which were not indicated by any other test but were substantiated by case histories.

Psychological services in determining adoptability through the functions of a public agency. LAWRENCE C. SCHREIBER, *Los Angeles County Bureau of Adoptions*. (Introduced by KATHLEEN STENDEL)

Presenting an administrator's convictions of the psychologist's importance in adoptions programs through the services of public agencies authorized under 1947 California Enabling Legislation. Experience in this particular field covers a period in Los Angeles County of but three years but is significant in its successful earlier placement of infants and comprehensive consideration of children heretofore not served or arbitrarily* determined as poor adoption risks because of inadequate psychological or psychiatric attention.

Correlated professional services in adoption agency practice. KATHLEEN STENDEL, *Los Angeles County Bureau of Adoptions*.

Brief description of four cases of children studied for adoption by a public agency. Cases illustrate certain professional procedures in problematic behavior which developed before and after placement and during the year of supervision until legal adoption became final. Manifest behavior, psychological evaluation, and psychiatric diagnosis, treatment, and recommendation are discussed. Follow-up observations are stated for each case.

General Clinical

MAUD A. MERRILL, Chairman

A study of clinical judgment. BERTRAM R. FORER and RUTH S. TOLMAN, *VA Mental Hygiene Clinic, Los Angeles*.

Thirty psychologists made judgments on the clinical usefulness of Sentence Completion Test items and indicated the certainty they felt in mak-

ing each judgment. Kind of content rather than form of an item (first or third person) influences judgments of its value. Clinicians vary consistently in confidence. Confidence is associated with positive evaluations of clinical usefulness, extremeness of judgment, and independence.

An evaluation of the psychological processes of the neurosyphilitic: IV. Wechsler "deterioration" indices in a graded brain damage population. IRLA LEE ZIMMERMAN, ELLEN B. SULLIVAN,* ROY M. DORCUS, THOMAS H. STERNBERG, and MURRAY C. ZIMMERMAN, *University of California, Los Angeles*.

The Wechslers of three groups of neurosyphilitic patients: asymptomatic, general parietic, and general parietic with psychosis, were compared with those of a control group of syphilitic patients without central nervous system involvement, by utilizing various indices of mental deterioration developed for use with the Wechsler-Bellevue Scale. Results indicate that the measures utilized varied greatly in screening ability.

Relationship between degree of incapacity and personal and social adjustment of patients with spinal cord injury. CHARLYNE T. STORMENT-SEYMOUR, ERNEST BORS, F. HAROLD GIEDT, and HERBERT GOLDENBERG, *Veterans Administration Hospital, Long Beach*.

Degree of physical incapacity and personal and social adjustment of twenty male patients with spinal cord injury were studied. Two matched groups, ten quadriplegic, ten paraplegic, compared by (a) social adjustment scale, (b) personal adjustment scale based on Rorschach records. Quadriplegics obtained best social adjustment ratings, personal adjustment trend same direction. Hypothesis: greater physical incapacity results in lowered aspiration level, fewer resultant frustrations.

A study of intellectual deterioration in a case of prolonged cerebral anoxia. JAMES H. SHARP, *Veterans Administration Hospital, Long Beach*. (Introduced by HAMILTON M. MOODY)

The study presents a somewhat detailed evaluation of a single case of gross, diffuse brain damage resulting from prolonged cerebral anoxia. While impairment is extensive and severe, there is a remarkable retention of some of the presumably more abstract functions, and no true aphasia, agnosia, or

apraxia can be demonstrated. There is, however, a consistent and near-complete loss in the ability to synthesize meaningful and appropriate gestalts from their constituent elements.

Testing patterns in a case of acromegaly. HAROLD GEIST and RALPH CRAWSHAW, *Mare Island Naval Hospital, Mare Island*.

A battery of intelligence and personality tests was administered to an acromegalic patient (a disease which is an eosinophilic adenoma of the anterior pituitary causing enlargement of the bones and joints and disfigurement). Test result in terms of past (previous to disease) and present history will be discussed with special reference to perception of the self and wish fulfillment.

Communication disorders of children with impaired hearing and the role of interpersonal relations. BORIS V. MORKOVIN, *University of Southern California*.

Disruption of the child's interpersonal relations due to sudden deafness blocks his communication and may give rise to a psychogenic overlay. Under the influence of new communicative climate and relations, the child becomes receptive to learning language techniques (speech-reading, auditory training, and speech), and willing to use them in group participation.

The deeper dilemmas of the psychologist in private practice. E. PARL WELCH, *Los Angeles*.

Restricting psychological practice to medical referrals and clearances dissolves the "impossible dilemma" (Report of Ad Hoc Committee on Relation of Psychology to the Medical Profession) but produces four more: (a) choice of unprejudiced, competent physicians, (b) preserving autonomy in collaboration, (c) use of psychodiagnostic investigations, and (d) the problem of building a practice and livelihood. Suggested solution: a medically related, but therapeutically autonomous practice.

Medical acceptance or rejection of the clinical psychologist in private practice. M. J. FREEMAN, *Los Angeles*.

A study was made to determine the extent to which medical doctors understand and make use of the work of the clinical psychologist in private practice. One hundred doctors in various sections of Los Angeles County were interviewed. The results showed that very few doctors are aware of the fact that the clinical psychologist's university training and internship almost equaled that of their own.

* Deceased

Very few of them were aware of the quality and extent of the psychodiagnostic and psychotherapeutic skills of the clinical psychologist.

The first two years of a private psychological service center. MAURICE RAPKIN, STEWART B. SHAPIRO, and DAVID GROSSMAN, *Los Angeles Psychological Service Center*.

This report is being presented because of possible interest to psychologists in alternatives to independent private practice in offering psychological services to the community. The following will be discussed: history and purposes of the Center; organizational structure (personnel, qualifications, relation to psychiatrists, staff meetings, fee policy); patient population; standard intake procedure; some special problems (research, medical clearance, etc.).

The dynamics of listening. JERRY R. SOMMER, BERNARR MAZO, and GEORGE F. J. LEHNER, *University of California, Los Angeles*.

The present report is one of a series of studies attempting to investigate the process of listening, particularly as a therapist listens to a patient. Different therapists were presented selections of a tape-recorded therapy interview with the original therapist's responses deleted, and asked to respond to the question, "What has the patient told you?" Therapists responses were analyzed in terms of (a) amount of listening, (b) content categories, (c) interpretative versus descriptive responses, and (d) therapist-patient verbal contradictions.

Educational Psychology

HOWARD R. TAYLOR, Chairman

Performance of children in a discrimination problem as a function of symbolic guidance, delay of reward, and mental ability. ALFRED JACOBS, *University of Southern California*.

Mentally defective children were compared with institutionalized children of normal intelligence in learning which of three pushbuttons was correct for each of three ambiguous visual stimuli. Hypotheses were tested with respect to the effects on performance of delay in reward, and of designating the ambiguous stimuli by names supplied by the experimenter to the subjects.

A comparison of the attitudes of teachers nominated as "outstandingly superior" and teachers nomi-

nated as "outstandingly poor" by their principals.

EDWIN WANDT, *American Council on Education*.

Principals nominated "superior" and "poor" elementary, English-social studies, and mathematics-science teachers. Comparisons were made between the attitudes of these "superior" and "poor" groups. In each field, "superior" teachers were very significantly more favorable in their attitude toward pupils and significantly more favorable in their attitude toward administrators. There were no significant differences in attitude toward adult non-administrative groups.

Psychotherapeutic approaches to teaching. DAVID GROSSMAN and VERNON B. GREDING, *Los Angeles Psychological Service Center*.

To ascertain if insight and expression of feeling can be increased by classroom psychotherapeutic techniques without sacrificing academic knowledge, pre- and postsemester testing was employed. Approaches included writing emotional reactions to textbook material, four practice counseling sessions, "buzz" sessions, and student-centered discussions. Most students felt they benefited therapeutically and academically. Feeling expression was significantly increased but not insight.

An investigation of the relationship between teaching effectiveness and the teacher's attitude of acceptance. HAROLD J. REED, *University of Southern California*.

One hundred and four secondary school teachers participated in a study to determine the relationship between teaching effectiveness and an attitude of acceptance as measured by a sentence completion test. Student evaluations were found to be reliable measures of teaching effectiveness. Reliability coefficients for scoring the SCT ranged from .84 to .95. The SCT identified correctly 75% of the effective and ineffective teachers.

Factors influencing graduate student morale. JAMES M. HOLT and GEORGE F. J. LEHNER, *University of California, Los Angeles*.

A questionnaire study of factors influencing graduate student productivity and work satisfaction (morale) indicates concern with seven major areas: (a) relationships with faculty, (b) relationships with fellow students, (c) relationships with public, professional, and academic groups; problems related to (d) nature of psychology, (e) departmental policies, (f) financial difficulties, and (g) feelings

of isolation from "real-life" activities. Significance of results for students, faculty, and administration will be discussed.

A long range comparison of IQ constancy and physical measurement. WILLIS C. DRISCOLL, *Medical Field Service School, Fort Sam Houston.*

Constancy of intellectual and physical growth covering a 10-year period was evaluated in a relatively permanent and homogeneous group. Mean correlations were .84 for height and weight and .71 for intelligence with a mean time interval of 59 months. Prediction of future height and weight would be 46% better than chance, and of IQ 30% better than chance.

A technique for estimating academic types. EUGENE I. BURDOCK and DUANE F. KELSO, *University of California, Los Angeles.*

A technique is described and illustrated for the estimation of academic types by examination of an item matrix of responses to the MMPI and the Strong Vocational Interest Inventory. Values of 1, 1/2, 0 were assigned respectively to the response categories True, Cannot Say, False on the MMPI and Like, Indifferent, Dislike on the Strong. An item matrix was constructed.

A system for evaluating counseling records. EDWARD M. ALKIRE, *VA Advisement and Guidance Section, Los Angeles.*

Validation of a System for Evaluating Counseling Records in which approximately five hundred cases were used. Comparisons were made between the rehabilitated and discontinued cases selected from the Veterans Administration Rehabilitation program. Physical qualifications and personality characteristics of the veterans were considered in approximately one-half of the cases. A positive relationship exists between rehabilitation, the information used and the adequacy of its use.

Projecting and abstracting: a theoretical approach. WILLIAM H. PEMBERTON, *College of Marin.*

A search for a simplified psychological theory useful to experimentalists, clinicians, and educators led to analysis of Alfred Korzybski's formulation of *abstracting* as a fundamental characteristic of life. Elaboration by examples of the projective nature of the abstracting process (called by the author "prostrating") accounts for human mis-evaluations ranging from the so-called normal to the psychopathological.

SYMPOSIA

Rorschach Prognostic Rating Scale

BRUNO KLOPPER, Chairman

Participants: FANNIE MONTALTO, WAYNE WISHAM, HAROLD GIEDT, and PAULINE VORHAUS
(Sponsored by the Society for Projective Techniques)

Counteracting Popular Misconceptions about the Practicing Psychologist

DOUGLAS HAYGOOD, Chairman

Participants: Members of the Los Angeles Society of Clinical Psychologists in Private Practice and the audience
(Sponsored by the Los Angeles Society of Clinical Psychologists in Private Practice)

The Relationship of the Clinical Psychologist to the Psychiatrist

IRVING STONE, Chairman

Participants: ANNA M. SHOTWELL, MARVIN R. SHAFER, ROBERT B. VAN VORST, and J. C. DIL-
LON and L. H. GOULD (guest psychiatrists)
(Sponsored by the Association of Clinical Psychologists in California State Civil Service)

Successful Psychotherapy—What Is It?

GEORGE MUENCH, Chairman

Participants: FRED W. BRADSHAW (guest psychiatrist), J. F. T. BUGENTAL, DOROTHY C. CONRAD, JEROME FISHER, and H. E. SCARBROUGH

Group Therapy, a New Setting for Systematic Research

GEORGE R. BACH, Chairman

Participants: WALTER JOEL, TIMOTHY LEARY, MARGARET PAUL, VERN KALLEJIAN, and H. V. INGHAM

Systems Research

J. L. KENNEDY, Chairman

Participants: W. C. BIEL, ALLAN NEWELL, R. L. CHAPMAN, ARNOLD SMALL, CLIFFORD MORGAN, and EDWARD KEMP

PROCEEDINGS OF THE TWENTY-THIRD ANNUAL MEETING OF THE EASTERN PSYCHOLOGICAL ASSOCIATION

CHARLES N. COFER, *Secretary*

University of Maryland

THE Eastern Psychological Association held its twenty-third annual meeting on March 28 and 29 at the Chalfonte-Haddon Hall in Atlantic City, New Jersey. A total of 1,168 persons was registered, including 593 members, 368 guests, and 207 APA members who joined EPA at the meeting. The membership of the Association now is 1,967, as compared to 1,780 a year ago.

Local arrangements for this meeting were made by Roy B. Hackman (Registration and Projection), Karl Heiser (Placement), G. Gorham Lane (Publicity), and I. Hammond Cubbage (Exhibits). The Presidential Address was presented by Frank A. Beach and was entitled, "The De-Scent of Instincts." The Program Committee, consisting of J. M. Bobbitt, chairman, W. C. H. Prentice, and P. B. Courtney, scheduled 130 papers, three symposia, and one showing of films. A number of other special meetings were held.

Some of the significant business items transacted at either the Annual Business Meeting or at the Board of Director's Meeting follow:

1. It was reported that Neal E. Miller was elected President (1952-53) and that Stuart W. Cook and Fred S. Keller were elected to full terms (1952-55) on the Board of Directors. The unexpired portion of Dr. Miller's term on the Board is to be completed by Carl Pfaffmann. G. Gorham Lane was elected Secretary for three years (1952-1955).

2. Appointments and reappointments were made as follows: Local Arrangements Committee for 1953, E. B. Newman, Chairman; Program Committee, Eliot Stellar; Representative to Council, AAAS, T. C. Schneirla; Membership Committee, Walter C. Stanley; Auditing Committee, L. Stolurow and J. McV. Hunt; Elections Committee, F. A. Beach and Alvin Liberman; Representative to the American Academy of Political and Social Science, J. C. Diggory and S. Asch.

3. The Association voted to hold its 1954 meeting in New York City at the Hotel New Yorker and its 1955 meeting in Philadelphia at the Hotel Benjamin Franklin. The 1953 meeting will be held at the Hotel Statler in Boston on April 24 and 25.

4. The Association's Committee on Academic Freedom was, on its own recommendation, discharged, since the Committee report indicated that matters of academic freedom could most properly be handled by the appropriate APA committee.

5. An amendment to the By-Laws was approved, providing that the election ballot must be mailed to the membership not less than 28 (instead of 60) days prior to the annual meeting.

6. Eighteen non-APA applicants were approved for membership. Four were rejected.

7. A motion was adopted expressing the appreciation of the Association to the retiring Secretary for his work.

8. It was voted to increase substantially the financial support of the Secretary's Office and to transfer much of the clerical work of the Treasurer to the Secretary.

9. The Program Committee asked for instructions concerning the policy which should guide it in accepting papers. The Board of Directors instructed the Committee to follow the policy of accepting papers on the basis of their scientific merit, rather than in terms of their estimated interest. The Board increased the permitted length of abstracts to 500 words to provide the Committee with a better basis for making its judgments, and it provided for the possibility of increasing the length of the meeting to three days in 1954 and 1955 should experience next year suggest the desirability of such a step.

10. The Association voted to continue its offer for another year of \$200 to the APA for the employment of a journalist in a study of publicity for psychological conventions.

11. The Association voted to offer the APA \$200 for the study of the value of having an APA placement representative function at regional meetings.

12. The Association voted to express its appreciation to the Local Arrangements Committee for their work in arranging the convention.

13. The interim report and the budget presented by the Treasurer were approved. His audited financial statement for the fiscal year 1951-1952 follows:

FINANCIAL STATEMENT AS OF MAY 1, 1952

For the Fiscal Year 1951-52

INCOME

Membership Dues	
Dues for current year, 1951-52	\$1431.00
Arrears for 1950-51	129.00
Arrears for earlier years	23.00
Dues paid in advance	20.00
Guest fees and sale of programs.....	389.50
Interest on savings account	44.52
Exhibitors fees	292.00
Total Income	\$2329.02

EXPENDITURES

Publication of Proceedings	\$ 170.25
Office of the Secretary	536.50
Office of the Treasurer	278.61
Printing, supplies, postage	663.25
Traveling expenses of officers	54.37
Program Committee	33.81
Expenses at Annual Meeting	191.36
Miscellaneous	14.56
Total Expenditures	1942.71
Surplus for 1951-52	386.31

BALANCE SHEET

Cash: Bank of New York	\$2521.40
New York Savings Bank	2254.92
Total Cash	\$4776.32
Capital: As of May 1, 1951	\$4390.01
Surplus for 1951-52	386.31
Total Capital	\$4776.32

We, the Auditing Committee for the year 1951-52, have examined the records in connection with this statement and find it to be a true and correct account.

Signed
WILLIAM E. KAPPAUF LAWRENCE M. STOLUROW

PROGRAM

Clinical Psychology I

H. MAX HOUTCHENS, *Veterans Administration*,
Chairman

Hostility in chronic neurological patients. PETER J. NAPOLI and LAWRENCE SWEENEY, *Franklin D. Roosevelt VA Hospital*.

Perceptual sensitization to sexual phenomena in paraplegic patients. HAROLD LINDNER, *McGuire VA Hospital*.

Psychological studies on patients undergoing non-convulsive electro-stimulation treatment (EST). M. BERAN, J. C. PERKINS, and R. W. SCOLLON, *VA Hospital, Lyons, N. J.*

The effect of electroshock therapy on the fluctuation rate of ambiguous perspective figures. V. R. FISICHELLI, F. V. ROCKWELL, and L. CLARKE, *Hunter College and Payne Whitney Clinic*.

The effects of varied activities on the postelectroshock EEG. LILA GHENT, *New York University College of Medicine*.

The relationship of disruption of personality during electroshock treatment to psychiatric improve-

ment. E. R. CAHEN and J. D. HOLZBERG, *Connecticut State Hospital, Middletown*.

A preliminary study in a behavioral analysis of the psychotherapeutic process. EDWARD J. MURRAY, *Yale University*.

An experimental investigation of contrasting social atmospheres in group psychotherapy with chronic schizophrenics. J. L. SINGER and G. D. GOLDMAN, *Franklin D. Roosevelt VA Hospital*.

Social Psychology

DOUGLAS COURTNEY, *Institute for Research in Human Relations*, Chairman

Factorial study of the rated behavior of group members. A. S. COUCH and L. F. CARTER, *University of Rochester*.

The influence of individual members on the characteristics of small groups. WILLIAM HAYTHORN, *University of Rochester*.

Effect of method of response on interaction of observer pairs. BERNARD MAUSNER, *New York University*.

Some determinants of accuracy of social judgments among Army recruits. RICHARD CHRISTIE, *New York University*.

Is there a "Law of Primacy" in persuasion? W. MANDELL and C. I. HOVLAND, *Yale University*.

A study of the "sleeping" effect in opinion change. WALTER WEISS, *Yale University*.

Factors affecting the resistance to change of group-anchored attitudes. H. H. KELLEY and E. H. VOLKART, *Yale University*.

The effects of directional bias of context on the responses to attitude items. SHELDON S. ZALKIND, *Richardson, Bellows, Henry and Company*.

Applied Psychology

ARTHUR W. AYERS, *University of Maryland*,
Chairman

The spectral density approach to a perceptual motor task. EZRA S. KRENDEL, *The Franklin Institute*.

The effect of a prefilm test on learning from an educational sound motion picture: An experiment. J. J. STEIN, *Pennsylvania State College*.

The development and use of scales for the description of supervisory behavior. EDWIN A. FLEISHMAN, *Lackland Air Force Base*.

The self-concept in proficiency measurement: Certain relationships among job performance self-estimates, attitudes toward the job, and proficiency measures. H. J. HAUSMAN and H. H. STRUPP, *Bolling Air Force Base*.

A universal criterion rating scale for the validation of a differential aptitude test screening battery. M. S. VITELES and W. W. WILKINSON, *University of Pennsylvania*.

The determination of criteria of readability. A. M. KERSHNER and R. C. HACKMAN, *The Personnel Research Center and the University of Maryland*.

Accuracy of knob-setting (bisection of angular extents) as a function of friction and of inertia. B. WEISS and S. D. S. SPRAGG, *University of Rochester*.

Accuracy of tactual discrimination of letters, numerals, and geometric forms. T. R. AUSTIN and R. B. SLEIGHT, *The Johns Hopkins University*.

Vision

W. C. H. PRENTICE, *Swarthmore College*,
Chairman

A study of pupillary diameter and the decrease of critical flicker frequency after 50 years of age. JOHN A. VOLLENWEIDER, *Fordham University*.

Influence of exposure time upon the perception of visual flicker. W. S. BATTERSBY and R. JAFFE, *New York University College of Medicine*.

Figural after-effects of colored stimuli, with and without brightness difference. J. E. HOCHBERG and C. B. HOCHBERG, *Cornell University*.

An experimental determination of some iso-color lines in color deficient vision. R. M. HALSEY and A. CHAPANIS, *The Johns Hopkins University*.

Monocular mixture of pure hues. L. M. HURVICH and D. JAMESON, *Eastman Kodak Company*.

The effects of pre-adaptation on color adaptation-time in the *Ganzfeld*. W. TRIEBEL and J. E. HOCHBERG, *Grasslands Hospital and Cornell University*.

Monocular movement parallax thresholds as a function of needle offset and speed of stimulus movement. R. T. ZEGERS, S.J., and H. V. POLAND, *Fordham University*.

Human Learning I

JAMES E. DEESE, *The Johns Hopkins University*,
Chairman

A statistical model for free verbal recall. G. A. MILLER and W. J. MCGILL, *Massachusetts Institute of Technology*.

The effect of reinforcement on the alternation of guesses. J. B. HUGHES II, *University of Pittsburgh*.

Perception of the statistical structure of a random series of binary symbols. RAY HYMAN and H. W. HAKE, *The Johns Hopkins University*.

The information channel-capacity of the human operator. J. C. R. LICKLIDER, *Massachusetts Institute of Technology*.

The assimilation of information as a function of the rate of presentation of information. IRWIN POLLACK, *Human Resources Research Laboratory*.

Hypotheses relevant to communications research. C. R. CARPENTER, *The Pennsylvania State College*.

Context and stimulus patterning in learning. ROBERT B. MILLER, *American Institute for Research*.

Phenomena characteristic of high degrees of learning. EDGAR L. SHRIVER, *The American Institute for Research*.

Animal Learning I

H. H. KENDLER, *New York University*,
Chairman

The effect of repeated conditioning-extinction upon operant strength. D. H. BULLOCK and W. C. SMITH, *University of Buffalo*.

The reinforcing effect of auditory stimuli on operant behavior in the human infant. O. LINDSLEY and M. LINDSLEY, *Harvard University*.

Discrimination of reinforcement conditions produced by repeated conditioning and extinction. SUE RABAN, *Columbia University*.

Effect of degree of food deprivation before satiation on the performance of a bar-pressing habit at "zero" hunger drive. MITCHEL M. BERKUN, *Yale University*.

The effect of motivation on extensity of learning. JOSEPH J. GREENBAUM, *Wesleyan University*.

ACTH, anxiety, and avoidance learning. M. H. APPELZWEIG and F. D. BAUDRY, *Wesleyan University*.

A comparison of light-shock and sound-shock avoidance training when presence of CS during responding is controlled. W. C. STANLEY and J. A. WHITTENBURG, *Brown University and University of Maryland*.

Clinical Psychology II

J. ARTHUR WAITES, *VA Hospital, Perry Point, Md.*,
Chairman

A comparison of Basic Rorschach Scores with judgments of adjustment based on clinical case material. R. L. NEWTON and H. W. GOODMAN, *University of Pittsburgh, Western Psychiatric Institute and Clinic, and Veterans Administration*.

The validity of selected Rorschach signs of anxiety, compulsiveness, and depression. T. G. ROULETTE and G. M. GUTHRIE, *The Pennsylvania State College*.

The validity of selected Rorschach signs of emotional stability, dominance, submissiveness, and cyclothymia. G. P. SIDNEY and G. M. GUTHRIE, *The Pennsylvania State College*.

Comparison of a schizophrenic and a normal subject, both rated by clinicians as well-adjusted on the basis of "blind" Rorschachs. R. M. HAMLIN and R. L. NEWTON, *Western Psychiatric Institute and Clinic*.

The psychological diagnosis of schizophrenia. MILTON S. GURVITZ, *Hillside Hospital and Adelphi College*.

The prediction of "Ceased Keeping Appointment" behavior from the Rorschach test. B. KOTKOV and A. MEADOW, *University of Buffalo*.

The effects of pre-operative stress upon Rorschach factors alleged to be signs of anxiety. LEONARD BERNSTEIN, *Fordham University and Brooklyn VA Hospital*.

A comparison of the personality structures of patients with idiopathic epilepsy, hysterical seizures, and brain tumors. GEORGE D. GOLDMAN, *Franklin D. Roosevelt VA Hospital and College of the City of New York*.

Measurement I

RAY C. HACKMAN, *University of Maryland*,
Chairman

Preschool performance on the Stanford-Binet (revised) and the Wechsler Intelligence Scale for children. K. CARTEE and F. O. TRIGGS, *University of Maryland*.

The use of interpersonal correlations as indices of validity. W. J. E. CRISSEY and H. VON SCHELLING, *Queens College and Medical Research Laboratory, New London*.

A simple technique for unblocking test validation studies. THOMAS L. BRANSFORD, *New York State Department of Civil Service*.

A new formula and tables for the serial correlation coefficient. NATHAN JASPEN, *The Pennsylvania State College*.

A validity study of the general aptitude test battery of the United States Employment Service. M. J. SEITZ and G. G. LANE, *Delaware State Employment Service and the University of Delaware*.

The evaluation of rational decisions. I. LORGE, J. DAVITZ, K. HERROLD, and D. FOX, *Columbia University*.

An empirical evaluation of the latent class model of latent structure analysis. BERT F. GREEN, JR., *Massachusetts Institute of Technology*.

Animal Learning II

NEAL E. MILLER, *Yale University*, Chairman

The effects of deprivation of visual form definition upon the rate of learning a visual discriminatory task in the ring dove. ARTHUR I. SIEGEL, *American Museum of Natural History and Queens College*.

The effects of early social stimulation on mating responses in adult male rats. J. KAGAN and F. A. BEACH, *Yale University*.

The effect of restricted environment upon maternal behavior. BERNARD F. RIESS, *American Museum of Natural History and Hunter College*.

Differences in social behavior between dogs reared in "free" and "restricted" environments. W. R. THOMPSON and W. HERON, *McGill University*.

An investigation of the effect of early exploratory experience on irrelevant-incentive learning. ROBERT VINEBERG, *New York University*.

Relation of hunger deprivation to random activity. B. A. CAMPBELL and F. D. SHEFFIELD, *Yale University*.

Exploratory behavior as a function of "similarity" of stimulus situations. K. C. MONTGOMERY, *Cornell University*.

Reinforcement as a function of drive reduction. F. D. SHEFFIELD, T. B. ROBY, and B. A. CAMPBELL, *Yale University and U. S. Air Force*.

Personality

F. H. SANFORD, *American Psychological Association*, Chairman

Some correlates of insight. M. J. FELDMAN and D. BULLOCK, *University of Buffalo*.

An experimental investigation of the consistency of stress tolerance. MURRAY S. STOPOL, *Columbia University*.

The interrelationships of several measures of rigidity under varying conditions of security. DEE G. APPLEZWEIG, *Smith College*.

An experimental investigation on the relationship between the *Einstellung* effect and "variability of response." RONALD HENRY FORGUS, *Cornell University*.

Development of group measures of level of aspiration. H. N. RICCIUTI and D. G. SCHULTZ, *Educational Testing Service*.

Level of aspiration measures and college achievement. D. G. SCHULTZ and H. N. RICCIUTI, *Educational Testing Service*.

Personality and background characteristics of volunteers and non-volunteers. H. H. DAVIDSON and L. P. KRUGLOV, *City College of New York*.

Permissive child-rearing and adult role behavior in children. HARRY LEVIN, *Harvard University*.

Relationships between child rearing practices and children's behavior. J. R. WITTENBORN, *Yale University*.

Physiological Psychology

CLIFFORD T. MORGAN, *The Johns Hopkins University*, Chairman

An experimental study of the effects of Dexedrine (d-amphetamine sulfate) on motor and mental performance and some factors in mood. J. C. BALLOCH, T. A. LA SAINÉ, and J. M. ROBINSON, *Fisk University and Meharry Medical College*.

The effect of electro-convulsive shock on frustration—instigated behavior in the rat. R. S. FELDMAN and C. C. NEET, *University of Massachusetts*.

The effect of electro-convulsive shock on an inhibited conditioned response in the albino rat. C. HAMILTON and R. A. PATTON, *University of Pittsburgh, Western Psychiatric Institute*.

Role of the cerebral cortex in tactual form discrimination in the rat. J. P. ZUBEK, *McGill University*.

Effects of temporal lobe ablations on visually guided behavior in primates. MORTIMER MISHKIN, *Institute of Living*.

Intellectual effects of temporal lobe damage in man. BRENDA MILNER, *University of Montreal and Montreal Neurological Institute*.

A study of the preferences of normal and adrenalectomized albino rats for ten different concentrations of sodium chloride. ARTHUR E. HARRIMAN, *Cornell University*.

An experimental investigation into the interpretations proposed to account for the development of salt preference in adrenalectomized rats. ARTHUR E. HARRIMAN, *Cornell University*.

Perception

JAMES J. GIBSON, *Cornell University*, Chairman

The effects of interval and duration of visual stimuli upon the time error. GERALD J. FOX, *Fordham University*.

Figural displacements as a function of the relative position of body and object. J. H. BRUELL and A. G. GOLDSTEIN, *Clark University*.

The effect of motor activity on the autokinetic phenomenon. ALFRED E. GOLDMAN, *Clark University*.

After-effects of prolonged inspection of apparent movement. NORMAN H. LIVSON, *Worcester State Hospital*.

The effect of unit-formation factors and developmental level on transposition. C. E. STULL, *The Training School, Vineland, N. J.*

The accuracy and variability of adjusting the perpendicular to a straight line. J. M. WHEELER and J. VOLKMANN, *Mount Holyoke College*.

The effect of remote contours on the apparent tilt of lines. T. MARILL and E. G. HEINEMANN, *Cornell University*.

SYMPOSIA

Predoctoral Training in Psychotherapy

SEYMOUR G. KLEBANOFF, Chairman, NEAL E. MILLER, PAUL EISERER, SAMUEL KUTASH, OSKAR DIETHELM, and JOHN DOLLARD

The Meaning of Projection

JOHN E. BELL, Chairman, EUGENIA HANFMANN and SOLOMON MACHOVER

(This symposium was sponsored jointly with the Society for Projective Techniques.)

Critique of Current Practices and Problems in Mental Deficiency

E. LOUISE H. PORTER, Chairman

L. N. YEPSEN: Psychologist's responsibilities in determining mental deficiency.

S. B. SARASON: The status of psychological training and research in mental deficiency.

JOSEPH JASTAK: Interpreting mental deficiency.

Presidential Address and Annual Business Meeting

CARL I. HOVLAND, Chairman

Presidential Address: The De-Scent of Instincts. FRANK A. BEACH.

Clinical Psychology II

M. J. GARRISON, *University of Pennsylvania*, Chairman

The relationship of terror dreams to neuropsychiatric fitness for Naval duty. HALSEY M. MACPHEE, *University of Delaware*.

A study of the interaction between ego-involvement and test anxiety. G. MANDLER, S. B. SARASON, and P. C. CRAIGHILL, *Yale University*.

Some correlates of test anxiety. S. B. SARASON and G. MANDLER, *Yale University*.

Rorschach movement responses following motor inhibition and hyperactivity. J. L. SINGER, J. MELTZOFF, and G. D. GOLDMAN, *F. D. Roosevelt VA Hospital and VA Mental Hygiene Clinic, Philadelphia*.

Analysis of distortions of Bender-Gestalt figures as indices of psychosexual disturbances. CLAIRE M. VERNIER, *Martinsburg VA Center*.

An analysis of frustration behavior in a puzzle-solving situation in relation to scores on the Rosenzweig Picture-Frustration study. HARRY BORNSTEIN, *Fordham University*.

Comparison of human figure drawings by behavior problem and normal control boys. VIRGINIA W. EISEN, *Fordham University*.

A schedule for rating psychiatric patients on psychodynamics, manifest behavior, and complaints. M. LORR, E. RUBINSTEIN, and R. L. JENKINS, *Veterans Administration Central Office*.

Discomfort-relief quotient as a measure of tension and adjustment in schizophrenia. A. MEADOW, M. GREENBLATT, M. LEVINE, and H. C. SOLOMAN, *University of Buffalo and Harvard Medical School*.

Audition

EDWIN B. NEWMAN, *Harvard University*,
Chairman

A statistical interpretation of neural response to pairs of acoustic clicks. W. J. MCGILL and W. A. ROSENBLITH, *Massachusetts Institute of Technology and Harvard University*.

Adaptation of the ear to sound stimuli: The intensity-time relationship. P. A. KELSEY and A. I. RAWNSLEY, *Medical Research Laboratory, New London*.

Investigation of the tuning of the basilar membrane by a fatigue technique. A. I. RAWNSLEY, *Medical Research Laboratory, New London*.

Initial and chronic effects of intense pure tone stimulation when the magnitude of the initial injury is controlled. F. J. GITHLER and I. E. ALEXANDER, *Princeton University*.

The nature of loudness recruitment. J. DONALD HARRIS, *Medical Research Laboratory, New London*.

An evaluation of some recent developments in auditory theory. E. G. WEVER and M. LAWRENCE, *Princeton University*.

On the locus of pitch discrimination in the auditory system. STEPHEN E. STUNTZ, *Medical Research Laboratory, New London*.

Measurement II

DENZEL D. SMITH, *University of Maryland*,
Chairman

A study of the effect of specialized training on scores of the Kuder Preference Record. FRANCES O. TRIGGS, *University of Maryland*.

Test-retest reliability of the Kuder Preference Record from high school to college. A. BOUTON, Major, M.S.C., and F. HERZBERG, *Allegheny Vocational Counseling Center, University of Pittsburgh, U. S. Army Medical Department*.

A new test: The pictorial occupational interest survey. RALPH H. MARKUS, *Allegheny Vocational Guidance Center*.

Interest item response arrangements as it affects discrimination between professional groups. JOHN V. ZUCKERMAN, *The George Washington University*.

The importance of goal aspiration in academic success. GEORGE WEIGAND, *University of Maryland*.

Changes in Kuder Preference profiles from high school to college. F. HERZBERG and A. BOUTON, Major, M.S.C., *Allegheny Vocational Counseling Center, University of Pittsburgh, U. S. Army Medical Department*.

The relative effectiveness of interest and personality items in evaluating professional performance. HYMAN BRANDT, *American Occupational Therapy Association*.

Some properties of a personality scale to measure level of self-consciousness. DAVID R. SAUNDERS, *Educational Testing Service*.

Human Learning II

HAROLD SCHLOSBERG, *Brown University*,
Chairman

Experiments on token reward behavior of children: II. Acquisition and extinction of an instrumental response sequence. WILLIAM W. LAMBERT, *Cornell University*.

Primary stimulus generalization to a complex vocal stimulus. ROBERT W. GILMORE, *University of Pittsburgh*.

Verbal transfer of overlearned forward and backward associations. E. RAE HARCUM, *The Johns Hopkins University*.

Transfer and generalization of the inhibitory potential developed in rote serial learning. S. SHAPIRO, T. G. ANDREWS, and C. N. COFER, *University of Maryland*.

Stimulus discriminability in concept attainment. MARIAN H. BAUM, *Yale University*.

Associative factors in reasoning: The Maier hat-rack problem. C. N. COFFER and S. GELFAND, *University of Maryland*.

Probability preferences in gambling behavior. WARD EDWARDS, *The Johns Hopkins University*.

Experimental Psychology

FRANCIS W. IRWIN, *University of Pennsylvania*,
Chairman

Stimulus complexity and preference value as variables in a size estimation situation. F. L. SMITH and A. H. RITTENHOUSE, JR., *University of Delaware*.

Stimulus similarity and the anchoring of subjective scales. DONALD R. BROWN, *Bryn Mawr College*.

A methodological flaw in ESP experiments. R. S. KAUFMAN and F. D. SHEFFIELD, *Yale University*.

Do incorrectly-perceived tachistoscopic stimuli convey some information? P. D. BRICKER and A. CHAPANIS, *The Johns Hopkins University*.

Neurotic conflict: A dimension in perception-personality research. PAUL R. DINGMAN, *Brattleboro Retreat*.

Multidimensional psychophysics: A new research method. T. G. ANDREWS, *University of Maryland*.

Pain scaling. PAUL SWARTZ, *Hobart College*.

Motion Picture Films

C. R. CARPENTER, *The Pennsylvania State College*,
Chairman

Irrelevant rewards and representative factors in animal learning. I. D. LORGE, A. T. POLIN, and N. N. STOCKHAMER, *Columbia University and Hunter College*.

Demonstrations in perception. WILLIAM N. ITTELSON, *Princeton University*.

A long time to grow. L. J. STONE, M. F. LANGMUIR, E. OMWAKE, and J. BOHMER, *Vassar College*.

Fears of children. Produced for the Mental Health Film Board by International Film Foundation. Written and directed by FRANCIS THOMPSON.

Farewell to childhood. Produced for the Mental Health Film Board by Herbert Kerkow, Inc. Written by FRANK BECKWITH, directed by JULIAN ROFFMAN.

Manuscript received May 14, 1952

PROCEEDINGS OF THE TWENTY-SECOND ANNUAL MEETING OF THE ROCKY MOUNTAIN BRANCH OF THE AMERICAN PSYCHOLOGICAL ASSOCIATION

LAWRENCE S. ROGERS, *Secretary*

Veterans Administration, Denver

THE Rocky Mountain Branch of the American Psychological Association held its twenty-second annual meeting with the Psychology Section of the Colorado-Wyoming Academy of Science on May 2 and 3, 1952, at the University of Colorado, Boulder, Colorado. Twenty-one papers were read and in addition a regional meeting of Psi Chi was held under the chairmanship of Dr. Anna Y. Martin of New Mexico Highlands University. A luncheon was also held by this group. At the request of the Education and Training Board of the American Psychological Association a meeting of heads of departments of psychology was held under the chairmanship of Dr. Hugh B. McFadden of the University of Wyoming.

Dr. Herbert Klausmeier, president, served as chairman of the business meeting. Several changes in constitution were made. It was voted on the motion of Dr. Bruce to increase the dues to \$2 a year for members and \$1 a year for student affiliates. It was also recommended on the motion of Dr. Rogers that all those who present papers must be members of the organization. On the motion of Dr. Glad it was voted that the function of treasurer be separated from that of secretary. The treasurer is to have a three-year term overlapping that of the secretary.

An invitation was extended by Dr. Ralph Norman to hold the next meeting at the University of New Mexico. The invitation was accepted and the next meeting will be scheduled for the month of April 1953 at the University of New Mexico, Albuquerque.

The following officers were unanimously elected: President, Ralph D. Norman, University of New Mexico; President-Elect, Hugh B. McFadden, University of Wyoming; Virginia M. Brown, Lowry Air Force Base, Treasurer. Lawrence S. Rogers,

Veterans Administration, Denver, continues as Secretary.

PROGRAM

Friday Morning

KARL F. MUENZINGER, *Chairman*

A comparison of the Rorschachs of juvenile auto thieves and juvenile burglars. STEVEN M. JACOBS and E. ELLIS GRAHAM, *University of Denver*.

The basic personality pattern of delinquents. ANNA MARTIN, *New Mexico Highlands University*.

An adaptation of the Stanford-Binet Intelligence Test, Form M, for use by a blind examiner. WALTER F. STROMER and E. ELLIS GRAHAM, *University of Denver*.

Mode flexibility as a function of rate of solution approach. CHARLES D. FINK and JACK R. GIBB, *University of Colorado*.

Two situational determiners of mechanization in problem solving. DAVID T. BENEDETTI, *University of New Mexico*.

Friday Afternoon

ALFRED B. SHAKLEE, *Chairman*

Substitutive and social solution fantasy: Relations between fantasy and behavior as a function of the degree of illness of schizophrenia. HAROLD DEAN BLESSING, *University of Denver and Colorado Psychopathic Hospital*, and DONALD D. GLAD, *University of Colorado Medical School*.

Experimental use of the Emotional Projection Test and the Rorschach in the study of emotional changes. CURTIS W. PAGE, *University of Denver and Colorado Psychopathic Hospital*, and DONALD D. GLAD, *University of Colorado Medical School*.

The validity of the Wechsler-Bellevue Intelligence Scale with Spanish speaking college students. CARLOS F. CORTES and LILLIAN G. PORTENIER, *University of Wyoming*.

Certain aspects of Wechsler-Bellevue scatter in low IQ levels. FREDERICK SCHNADT, *Veterans Administration Hospital, Fort Lyon, Colorado*.

Sociometric problems in air crews. MARIO LEVI, *Human Resources Research Laboratories, Camp Carson, Colorado*.

MMPI personality patterns for various college major groups. RALPH D. NORMAN and MIRIAM REDLO, *University of New Mexico*.

Saturday Morning

ARNO LUKER, Chairman

Changes in schizophrenic behavior in group therapy as a function of the type of therapist activity. RICHARD B. HARTLEY, *University of Denver and Colorado Psychopathic Hospital*, and DONALD D. GLAD, *University of Colorado Medical School*.

The schizophrenic Thematic Apperception Test responses and behavior in acutely psychotic and social remission stages. HAL KEELEY, *University of Denver and Colorado Psychopathic Hospital*, and DONALD D. GLAD, *University of Colorado Medical School*.

Characteristics of behavior in therapy as a function of types of feeling formulations. ROBERT

FERGUSON, *Colorado State Hospital*, JOSEPH ANDERSON, *Yanktown State Hospital, South Dakota*, and DONALD D. GLAD, *University of Colorado Medical School*.

Relationships between emotional projection test responses and the process of improvement in a therapy group of paranoid schizophrenics. E. FREDERICK THOMPSON, *University of Denver and Colorado Psychopathic Hospital*, and DONALD D. GLAD, *University of Colorado Medical School*.

Identification and ego defensiveness in Thematic Apperception. RICHARD C. COOK, *Fitzsimmons Army Hospital, Denver*.

Item intercorrelations within the Szondi "factors." LEONARD V. GORDON, *University of New Mexico*.

Some semantic aspects of memory. ELWOOD MURRAY, *University of Denver*.

The relationships of attitudes and changes in attitude toward survival adequacy to the achievement of survival knowledge. E. PAUL TORRENCE, *Human Resources Research Laboratories, Camp Carson, Colorado*.

Job satisfaction of teachers as related to parental occupation level. GEORGE H. JOHNSON, *University of New Mexico*.

Religious delusions in psychosis: A comparative study. WARNER L. LOWE, *University of Denver*.

Manuscript received May 12, 1952

Comment

Tomorrow's Psychology Teachers: Film Librarians and Stage Directors?

Will audiovisual aids displace personal instruction until the *teacher* is the auxiliary? An emotional and economic stake in the answer to the question makes it difficult to evaluate. It is comforting to feel indispensable. But, aside from the understandable warmth with which we regard the value of our personal presence, what has science to say about the matter?

Films have produced approximately as much factual knowledge of a general science course as personal instruction (4). Two studies proved that for specified conditions television and film recordings can be as good as, or better than, traditional instruction (2, 3). In New York City a "living blackboard" will be offered "for advanced pupils confined to their homes" (5). As a side light on the assumption of the necessity for informal give and take in small sections, it should be noted that lectures to large groups of psychology students were found to be apparently as effective as small discussion groups (1). Further research is under way.

It must be conceded that the studies mentioned are primarily concerned with success in imparting information. Admittedly the ability of mechanical methods to deal properly with motivation, interest, and critical thinking has not, as yet, been evaluated. Nevertheless, a large amount of college time is and will continue to be devoted precisely to that unglamorous acquisition of factual knowledge that is literally the food for thought, no matter how much near-religious homage is paid to "ability to think." The youngest pupils and their comparative elders need parent surrogates more than information, but that need diminishes with maturity. Regardless of the qualifications and reservations that accompany the upsurge of mechanical education, it will, to say the very least, make great inroads upon the time needed for the personal presence of an instructor.

Will psychologists and other educators wait passively until some large organization embarks upon a program in which mechanization displaces a really sizable proportion of the teaching staff? With proper planning the trend could be anticipated and provided for.

At least three important needs for personal participation can *increase* with the growth of the audiovisual trend: (a) Recorded and broadcast education raises many problems of theory and technique which must be resolved by scientists. (b) Individual guidance of students is almost always understaffed and could claim far more time. (c) Many individuals who teach only to support themselves so that they can do research might,

with advantage to their institutions, themselves, and—perhaps not least—to their students, devote themselves more wholeheartedly to their scientific investigations.

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ROBERT TYSON
Hunter College

A Plan for Obtaining Laboratory Equipment

All, except those associated with the most fortunate institutions, are familiar with the problems of operating with restricted budgets. It occurred to me, somewhat belatedly, after approximately twenty years of so operating, that we might do well to systematize our scavenging practices. The results of our efforts in this direction have been gratifying and, I must say, astonishing. Other laboratories might find similar procedures helpful. This latter thought prompted the transmittal of the following document, which was sent to members of the staff of the School of Education:

"Those of you who are familiar with the development of the Psychology Laboratory facilities know that the course of this development has been somewhat erratic and, at all times, slow. Funds for equipment and supplies have never been large; in some years, they have been exceedingly meagre. There have been fortunate occasions when we have been able to acquire large and handsome items, such as our very fine Hampton chronoscope, the psychogalvanometer, etc. But in all years we have augmented our technical aids by combining ingenuity and labor with assorted junk. We are quite proud of some of these assemblies. For example, we have just completed a (to date unnamed) device compounded from the following items: gears from a bomb-sight; motor from an unidentified naval

gadget; plywood from a packing crate; rheostat from a power-driven, moving-film recorder; pulleys, made on our lathe, from brass stock given to me by my daughter's husband's half-sister's husband (this is true); a fragment from a Wheatstone stereoscope (which already had attained the status of fragment when I came to Penn State in 1930); two bronze knobs from an ancient 35-mm. projector; machine screws previously used in a mimeograph machine we found in the unexcavated portion of the basement of the building; and, finally, steel shafting which came to me as parts of a Meccano set when I was ten years old. When we have named this machine and are confident that we understand its functions, we shall be glad to give demonstrations.

"All of the above is by way of introduction. At present, even our stock of junk is low, and it is necessary to look for new sources of supply. This, then, is a letter of solicitation and we are quite serious about it. In any home there are likely to be items of junk, useless to the household but which, under skilled hands, might be transformed into apparatus adequate for instruction and research. We are asking you to inventory your junkpile and to decide whether or not there are items you would be willing to contribute to the Psychology Laboratory. If you find such items, just send us a note and we shall gratefully and joyfully collect them, at your convenience."

WILLIAM M. LEPLEY
Pennsylvania State College

Defining Psychotherapy

The definition of psychotherapy which appears in the Boulder Conference Report and about whose origin William Hunt speculates in his article (Clinical psychology—science or superstition. *Amer. Psychologist*, 1951, 6, p. 683) arose in the following situation. The topic of "Training and Psychotherapy" (Topic XII) was assigned, at the Boulder Conference, to several groups for intensive discussion. One such group (Group II), on August 28, 1949, with Victor Raimy as chairman and myself as recorder, wrestled with defining the topic but seemed to make little progress. After summarizing our group's discussion for the Conference, I added rather timorously, as my own summary of our efforts, the following remark:

"I am afraid that in spite of our efforts we have left therapy as an undefined technique which is applied to unspecified problems with nonpredictable outcome. For this technique we recommend rigorous training."

Reactions were mixed. Some thought this was expressing an unjustified cynicism of therapy; others felt it was an apt description of the situation. Hunt's reaction to this definition ("Certainly at no time did

the Conference approach more closely to a timely and unassailable truth.") will probably be met with equally divergent reactions.

Another expression of this frustration was the formulation, by Howard F. Hunt, George F. J. Lehner, and Clarence L. Winder, of a "law" of group productivity in the following terms: $R = \frac{ka^{1-N}}{b^t}$, where R = rate of development of ideas, N = number of persons in group and where $N \geq 1$, t = time spent in discussion and where $t > 0$, and k , a , and b are constants.

That is, group productivity (R) varies inversely as the product of the size of the group and the time spent in discussion, with maximum output obtainable with optimum number of participants—one. I hasten to add, however, that this expression referred to a specific situation, and was not a reflection of the Conference—which was highly productive, as seen in the published report.

GEORGE F. J. LEHNER
University of California
Los Angeles

The Training of Psychologists in Germany

I wish to point out a misstatement in the article "On the Training of Psychologists in Germany," by Hans G. Pfaffenberger (*Amer. Psychologist*, 1952, 7, 98-99).

Four years of elementary education (Volksschule) plus eight years of higher education (Gymnasium) are no more than equivalent to our eight years of public school plus four years of high school. Four plus 8 equals 8 plus 4. It, therefore, follows that, as a matter of fact, the German doctorate in psychology, as well as the diploma, falls far short of our PhD, since it requires no training on a college level. A German student, receiving his "Abitur" at 18, should have his doctorate at the age of 22, when an American student receives his BA, or at best his MA.

W. ERNEST WEINER
Levittown, N. Y.

Two Proposals for the Advancement of Clinical Psychology

After affiliation with five different hospitals and clinics, I have crystallized my impressions in the form of two proposals which, if brought into fruition, would, I believe, contribute more to the advancement of clinical literature than anything else I have seen suggested.

The first proposal concerns the founding of an organization to be called the Society for the Advancement of Clinical Psychology. This society should have its goals set and its *raison d'être* delineated by a board of clinical psychologists and seek its membership among

all interested persons. It should set up a campaign for funds and use effective, dignified methods of accomplishing its mission—the education of the general public by radio, television, and newspaper to the scope, value, and application of clinical psychology and the manner of selection of a clinical psychologist for consultation. The campaign should be carried to schools, churches, PTA's, business and other clubs and associations. Among its objectives should be eliciting popular support for the proper licensing and employment of qualified persons. The group should sponsor research and preventive psychology by exerting pressure on schools, prisons, and other institutions to hire an adequate number and quality of psychological clinicians.

The second proposal concerns the founding of a College of Clinical and Consulting Psychology. This should have two basic responsibilities:

1. To grant the degree of Dr. Clin. Psych. to all who meet certain specific requirements. These should include a PhD or EdD from a legitimate university, a clinical dissertation, certain specific courses in psychology, a psychological autobiography, one year of full-time employment under a qualified psychologist, one year of work under the direction of a psychiatrist, and fellowship in the Division of Abnormal and Clinical Psychology by at least one member of the applicant's doctoral committee. Roughly, this would be a half-way step toward the diplomate. At present we have only extremes in our professional frame of reference. The PhD degree confuses the public. A new degree is essential for public protection. The Dr. Clin. Psych. degree, and all similarities such as Dr. Cl. Psych., should be protected by copyright so that unscrupulous persons would be prevented from confusing the public.
2. To set training standards and work eventually towards the establishment of a school of psychology, comparable to a school of dentistry or medicine, at the university level.
3. To work in very close interrelationship with the mental health fields.
4. The College of Clinical and Consulting Psychology would be a paper organization with the above-mentioned functions. On its boards would serve those who are considered to be leaders in the field of clinical psychology. It would serve to improve the profession of clinical psychology, while the Society for the Advancement of Clinical Psychology would concern itself with public relations. There would not be a duplication of

APA functions or an overlapping of division activities, for, as far as I can see, there have been no activities by either of these fine groups, beyond verbalization and catharsis.

Some criticism anticipated may point out that the proposed organizations would be an imitation of what already exists in medicine. However, imitation is commendable if it serves a constructive purpose. Others may feel that time for "exploration" is not over. The situation in clinical psychology indicates that the time for action is past due. This does not mean the end of exploration and modification, which should properly go on *ad infinitum*.

THEODORE C. KAHN
*Parks Air Force Hospital
and Clinic*

Subsidizing Publication

I understand that a policy recommendation of the Publication Board has been adopted to the effect that there should be a sharing of composition costs by the author and the Association. In view of this recommendation, I, for one, would like to go on record in opposition. In my opinion, scientific publications in our field as well as in others are still being financed as if we are in the "horse and buggy age." What I have reference to is the fact that we finance scientific journals by means of subscriptions from impecunious college instructors and college libraries and by forcing authors to pay some share. We are moving into a new era of subsidized research in which millions are being spent for research but only dollars for publication of results of research. In other words, I believe that every research grant made by institutions, foundations, business and industry, labor unions, government agencies, etc. should include a budget item for publication of the results. They should not assume that there is an obligation on the college libraries and the impecunious professors to carry the burden of publishing subsidized research. Please do not misunderstand me. I am heartily in favor of subsidized research. Our researchers, however, and sometimes those who grant money for research have overlooked an obligation to pay for disseminating the results.

DONALD G. PATERSON
University of Minnesota

Across the Secretary's Desk

FINANCES OF APA PUBLICATIONS

In many respects, the APA's primary function is that of publishing scientific journals. Each year we edit and print around 6,000 pages of material and distribute more than a half a million separate journal copies to our members and to a variety of outside subscribers. This operation involves an enormous amount of work on the part of editors and others. It also involves a great deal of money. In 1951, the Association spent a total of \$233,765.55, approximately 77 per cent of its total income, on publications activity. The following paragraphs describe for APA members some financial aspects of the large publishing business they own. This report, like many reports to stockholders, may tell some members more than they want to know about APA publication finances, but any member who worries about the prices he pays for his journals or the bills he receives for extra composition costs, or the adequacy of publication outlets in psychology, or "the money APA makes on its journals" might like to know some financial facts about the Association's publications and might, upon exposure to these facts, suddenly come down with a bright idea about ways in which APA can, for a smaller investment of time and money, pay higher dividends in scientific communication. It is safe to predict that the Board of Directors, the Council of Representatives, 10,000 psychologists, and the business manager of APA publications would all be happy to have such ideas.

INCOME AND EXPENSE FOR "AUTOMATIC" PUBLICATIONS

Each member of the Association receives automatically the *American Psychologist*, *Psychological Abstracts*, *Psychological Bulletin*, and the *Directory*. In other words, a member "subscribes" to these publications by paying his dues, and from those dues a certain proportion is allocated to the charges for each of these journals. In a sense, the APA gives these publications to each member. But they must be paid for. And they must be paid for in most part from membership dues, for income from nonmember subscriptions and sales is relatively small.

The amount allocated from each member's dues for each of these publications is determined as follows: The total cost of printing and mailing the journal is determined by simply totaling the printer's bills for the year and subtracting therefrom the amount paid into the journal by authors for early publication and "extra composition" costs. To printing costs are added the editorial and administrative costs allocated to that particular publication. This total publication cost is then divided by the number of subscribers to the journal. This per-volume cost is then taken from each member's dues and allocated to the particular publication. In 1951 this procedure resulted in the following allocations from dues:

<i>American Psychologist</i>	\$2.36
<i>Psychological Abstracts</i>	3.04
<i>Psychological Bulletin</i>	1.35
<i>Directory</i>	2.87
Total	\$9.61

Each year the Association buys a number of extra copies of each issue of each journal to keep on hand to fill future orders. The cost of these extra copies is a real annual expense and, if added to the above figures for each member, gives the amount the Association actually paid per member in 1951 for the three "automatic" journals and the *Directory*.

<i>American Psychologist</i>	\$2.99
<i>Psychological Abstracts</i>	3.98
<i>Psychological Bulletin</i>	1.81
<i>Directory</i>	3.10
Total	\$11.88

The prices to outside subscribers are as follows:

<i>American Psychologist</i>	\$7.00
<i>Psychological Abstracts</i>	7.00
<i>Psychological Bulletin</i>	7.00
<i>Directory</i>	5.00
Total	\$26.00

According to this figuring, each Associate received in 1951 for his \$11.50 dues (Associates pay \$12.50, one dollar of which in most cases goes to a division) a group of publications for which APA paid \$11.88. The Association gains back-issue assets out of this

transaction, but in terms of cash APA got nothing from its Associates with which to run nonpublication operations. From each of our Fellows, the Association received \$4.62 for nonpublication activities. From members of the Student Journal Group, who for \$7.50 received the *American Psychologist*, *Psychological Abstracts*, and the *Directory*, we received little more than enough to pay the minimal cost of printing the publications. As most members will regard as proper, students contribute little or nothing for the editing or managing of the publications and nothing at all for the nonpublication functions of the Association.

For 1951 the three member journals had a "paper" net income of approximately \$5,300. There was a gross income of about \$19,000 from libraries, about \$4,700 from back issues, about \$9,000 from advertising. If any one of these sources of income were appreciably diminished, the three journals would either show a loss or would absorb a prohibitively larger proportion of dues income. It is clear that if our members were the only subscribers to these journals, we would be in trouble. We might say that now we are being supported by libraries who subscribe to our journals and/or purchase back issues.

INCOME AND COSTS FOR OTHER PUBLICATIONS

Unlike the three "automatic" journals and the *Directory*, all other APA publications are financed by (a) voluntary subscriptions from APA members, (b) subscriptions from libraries and other non-APA people, and (c) sale of single copies and back issues. The costs of producing each of these "voluntary" journals along with subscriptions prices to (a) members and (b) outside subscribers are presented in Table 1.

TABLE 1

Cost of "volunteer" journals and 1951 subscription prices

Journal	Cost of Producing 1951 Volume	1951 Price to APA Members	Price to Outside Subscribers
<i>Abnormal and Social</i>	3.83	3.00	6.00
<i>Applied</i>	3.28	3.00	6.00
<i>Comparative</i>	6.04	3.00	7.00
<i>Consulting</i>	3.46	3.00	5.00
<i>Review</i>	3.41	3.00	5.50
<i>Experimental</i>	8.54	6.00	14.00
<i>Monographs</i>	5.47	3.00	6.00

It is clear that in the case of none of these journals is the APA subscriber paying what it costs—according to our present accounting system—to produce the publication he receives. The subscribers to Club A, of course, get the journals at a still lower price (approximately \$2.50 per volume). Outside subscribers pay us some "profit" in every case, varying from \$.53 per volume on *Monographs* to \$5.46 per volume for *Experimental*. In terms of total income from subscriptions, we received in 1951 for these seven "voluntary" journals approximately \$42,000 from outside subscribers and approximately an equal amount from APA subscribers. This means that we have approximately twice as many APA subscribers as we have outside subscribers to these seven journals. We lost money on APA subscribers but made it up on outside subscribers. Of these outside subscribers, the largest proportion are

TABLE 2

Costs of "volunteer" journals and 1953 subscription prices

Journal	1951 Cost per Volume	1953 Price to APA Members	1953 Price to Outside Subscribers
<i>Abnormal and Social</i>	3.83	3.50	7.00
<i>Applied</i>	3.28	3.50	7.00
<i>Comparative</i>	6.04	3.50	8.00
<i>Consulting</i>	3.46	3.50	7.00
<i>Review</i>	3.41	3.50	6.50
<i>Experimental</i>	8.54	6.50	15.00
<i>Monographs</i>	5.47	3.50	7.00

libraries. Again it looks as if the libraries are financing our journals for our members.

The Council of Representatives voted in September 1951 to increase prices of our journals to outside subscribers and proportionately to raise prices to our own members. (Postal regulations require that we charge our members at least half of what we charge outsiders.) Table 2 presents the financial picture as it will look in 1953—provided publication costs stay the same.

If publication costs remain the same, which is doubtful, our situation in 1953 will appear sounder, but even if costs do stay the same it is obvious that we will need a number of outside subscribers and a good sale of back issues if we are to keep our journals self-supporting. The fact that publication costs continue to increase and the fact that not many additional libraries can be expected to stock up on our back issues should give us con-

siderable pause in spite of our 1953 increase in subscription rates. Our members will still be getting our journals at considerably less than what we here have termed cost. The picture for the *American Psychologist*, *Abstracts*, and the *Bulletin* is different, but still potentially alarming. These three journals will not show a loss because the basic costs are charged to dues income. But dues income is finite and the Association will still need money to operate its nonpublication activities.

With respect to these seven volunteer journals, we have to realize that "cost" can be determined in a variety of ways. The cost figures used above are based on the procedure of dividing the total cost of producing a volume by the number of volumes distributed. This is the cost of the "average" volume of any journal. We can take another view of costs that makes it appear we are making a "profit" from each of our members when we sell them a journal at a loss. We can say that we do not sell our members "average" volumes; we sell them volumes from the supply left over after we have supplied our outside subscribers. The first 1,000 copies of a journal are the expensive ones. These *must* be printed. After the first thousand, additional thousands are cheap. We can sell these additional thousands at very low prices and still net an income on each. This way of figuring has sufficient reality to mean that additional member subscribers—even though we theoretically lose money on each one—will improve the financial state of our journals.

The seven volunteer journals had a total 1951 income from all sources, other than the sale of back issues, of \$133,411.06. The total cost of operating these journals was \$137,310.70. In terms of annual self-support, then, these journals ran a deficit of \$3,899.64. This deficit was more than made up by the \$11,191.64 income from the sale of back issues, but the fact that these seven journals bear only 51 per cent of the editorial and administrative costs of running our publications while the three volunteer journals bear 49 per cent (vide infra) leaves room for doubt that these seven journals are truly self-supporting. Whether or not any of our publications pays its own way will depend not only on figures pertaining to hard cash but also on the sort of assumptions we adopt to guide our accounting procedures. These assumptions are stated and examined below.

METHOD OF ALLOCATING EXPENSES

In calculating the cost of publishing our journals we use a system involving (a) direct charges and (b) allocated charges. The principal direct charge is the printer's bill—including costs of paper, printing, binding, wrapping, and mailing. The allocated charges are those for the general central office expense. Table 3 below gives the percentages of central office expense items that are charged off to publications.

This system of allocation yields a total administrative and editorial expense for all APA publications. This total is then allocated among the various publications according to a formula that makes the charges to each journal proportional to the circulation of the journal times the number of issues per year of that journal. For each journal, the number of issues per year (x) is multiplied by the number of copies printed (y) to give a "publication units" figure (xy) for each journal. For 1951, the Association produced a total of about 550,000 publication units—550,000 separate copies of separate issues of journals. To this annual total, a certain percentage is contributed by each journal. In 1951, for example, the *American Psychologist*, with 12 issues and a print order of 11,800, had 141,600 "publication units" or approximately 25 per cent of the Association's total. The *Journal of Abnormal and Social Psychology*, with only four issues and a print order of 5,600, had a total of only 22,400 "publication units," or 4 per cent of the total. When this "publication unit" percentage is calculated for each journal, the percentages are then operated upon by a formula ($N/2 + .05$) designed to pull in the extremes of the distribution curve. The formula reduces the large figures and increases the smaller ones, drawing both closer to the mean.

TABLE 3

Allocation of general expenses to publications

Compensation to central office general employees	50%
Managing Editor	75%
Editorial Assistants	100%
Furniture and Equipment	50%
General Office Supplies	25%
Postage and Express	25%
Telephone and Telegraph	25%
Rent	50%
Council of Editors	100%

In 1951, the terminal results of this operation gave 18 per cent of the allocated expenses to the *American Psychologist*, 7 per cent to *Abnormal and Social*, 20 per cent to *Abstracts*, etc.

The general assumption lying behind this procedure is that the administrative burden represented by a journal increases with the number of issues and with the size of circulation. Also the procedure may have in it the sort of philosophy upon which income tax laws are based—the rate of payment is adjusted according to the ability to pay. Other assumptions and another philosophy will yield a somewhat different picture of the net income of the various journals. Both the Publications Board and the Finance Committee have examined the present and other possible methods of allocating costs among the journals but neither body seems to find the problem particularly nutritious. The general attitude seems to be that as long as publication finances in general are sound and as long as each journal serves a useful function nobody should bother himself much about which journal shows a “profit” and which a “loss.” A thick journal with a thin circulation will lose money. A thin journal with a thick circulation will break even. The APA has only relatively thick journals. Circulation varies greatly from journal to journal. As long as all the journals are in the same family, and the family mutually self-supporting, everything is fine. The problem of allocating costs among journals may be a technical matter, better left to those who, through detailed financial analysis, might find ways to save the Association a few dollars.

REPRINTS AND EXTRA COMPOSITION COSTS

For several years it has been the policy of the Association to give 50 free reprints to the authors of each regular article in our journals with the author being billed for the cost of any reprints in excess of 50. In 1950 and 1951, this service to authors cost the Association between \$2,000 and \$3,000 a year. Last September, the Council, upon the recommendation of the Board of Directors, voted to cease this practice and, for articles received after January 1, 1952, to require the author to pay for whatever quantity of reprints he desired. This change, if it is to stand, will save the Association perhaps \$700 in 1952 (a large number of manuscripts published in 1952 were received before January 1, 1952), and \$2,000 to \$3,000 in 1953. However, the Publications Board is recommending that

this 1951 action be repealed and other arrangements made to handle both reprints and charges, now passed on to authors, for extra composition costs.

It is the procedure now to charge authors for (a) the total cost of changes he himself makes in proof and (b) one-half the cost of tabular material, cuts, and other composition of a special, and hence expensive, sort. In 1951, authors paid on an average about \$2.00 per page for their changes in proof and for “extra” composition costs. This means that the Association paid around \$4.00 per page for these “extras” and collected around \$2.00 per page from authors. In 1951, the Association paid out, then, approximately \$20,000 to printers, over and above the “regular” printing bills, and collected approximately \$10,000 from authors for these extra costs.

The cost to individual authors varies decidedly, the variation depending primarily on the number of tables and cuts he includes. Authors who write articles without tabular material pay very little.

The Publications Board is making the recommendation that (a) we restore the practice of supplying 50 reprints and (b) authors not be charged according to the amount of tabular or special material included but be charged a flat per page rate for publishing in one of our journals. The financial implications of this arrangement are approximately as follows: 50 free reprints to each author would cost the Association, as in the past, around \$3,000 per year. Special and extra composition would continue to cost around \$20,000 per year. If authors pay a flat rate of \$2.00 per page, the cost to the Association for free reprints and special composition, would be around \$13,000. This is essentially what the cost was in 1951. If authors paid a flat \$3.00 per page, the Association would save about \$5,000 of this \$13,000.

EARLY PUBLICATION

Any author who wishes to pay the full cost of printing an article properly accepted for publication can have his article immediately published in an APA journal. It has been the practice to charge the author of such an article the full cost of all printing—regular and special—and to have him pay the full cost of all reprints he orders. Table 4 presents figures on (a) the per page cost to print the various journals, (b) the per page cost when administrative and editorial costs are added to the cost of printing, and (c) the 1951 charges to authors for early publication.

TABLE 4

1951 print costs, publication costs, and charges for early publication

Journal	Per Page Cost of Printing	Per Page Cost of Publication	Per Page Charges for Early Publication
<i>Amer. Psychol.</i>	\$33.56	\$48.47	\$28.00
<i>Abnormal</i>	21.61	29.57	17.00
<i>Applied</i>	18.13	27.47	15.00
<i>Comparative</i>	12.75	19.39	11.00
<i>Consulting</i>	17.14	24.88	14.00
<i>Experimental</i>	15.10	21.43	14.00
<i>Abstracts</i>	35.20	49.25	No prior pub.
<i>Bulletin</i>	21.13	31.05	17.00
<i>Monographs</i>	18.93	24.99	15.00
<i>Review</i>	13.74	24.43	14.00

The author actually pays more for early publication than indicated in the per page rates in Table 4 since he also bears the full cost of alterations, special composition, and reprints. These charges will add, on the average, about \$4.00 per page to what the author pays. The figures for print costs in Table 4 include what the APA pays the printer for special composition, so, in actuality, authors finally pay approximately what it costs to print their articles. They do not pay anything toward the editorial or administrative costs of the journal in which the article appears. In one way, then, APA subsidizes the authors of articles that appear early. In another way, since early publication articles are thrown as extras into a system already in operation, a few additional pages can be added to a journal without making a noticeable difference in editorial or administrative burden or cost. Any appreciable increase in early publication, however, would soon cause increased editorial and overhead costs and would soon lead to the idea that authors of early publication papers might well bear some of the editorial and administrative costs of getting the article on the desks of readers.

SUMMARY OF PUBLICATIONS FINANCES FOR 1951

Our books show a net income of \$12,846 for all our publications in 1951. Our publications are in the black. But there are red tinges to this black. If we eliminate income from the sale of back issues (\$16,052.09) the net figure becomes a deficit. We are leaning heavily on the back-issue source of income, a source that seems bound to run relatively dry relatively soon. Our members are getting three

volunteer journals below cost. The three "automatic" journals operate well in the black, but allocation of expenses to dues income, a procedure insuring that these publications will keep their financial heads up, eats heavily into the source of income for general APA functions.

If it appears that some worry about publication finances is in order, there are certain obvious courses of action—none of which anybody wishes to take—that will keep our publication business on a sound financial footing.

1. *Reduce printing costs.* The simplest way to do this is to reduce the number of pages published. Editors want more pages because as the number of psychologists increases there is more demand and need for increased, rather than decreased, publication outlets.

2. *Increase the number of outside subscribers.* We might conduct a concerted campaign to have more libraries and more individuals subscribe to our journals. Such a campaign will itself cost money, but it might pay off if there are many libraries still without our journals. The Central Office has tried a few ventures into salesmanship, without startling results.

3. *Increase the number of APA subscribers.* Although our membership has grown tremendously in the past five years, the number of voluntary member subscriptions to journals has increased very little. There has been a gradual decline in the percentage of our membership subscribing to the volunteer journals. There may be ways to increase this percentage. Every subscriber, from any source, we can add to our present lists will net us a profit unless we set give-away prices.

4. *Increase prices.* This has already been done for 1953. The chances seem good, however, that increased printing and editing costs will eat up the increased income. Also everybody connected with APA publications is a little inclined to spend the 1953 increased income—on extra pages and extra services—before we receive it.

5. *Increase advertising.* This is possible but there are definite limits. Psychologists use few tools in their business—mainly books, tests, and imagination. The latter is difficult to advertise and we cannot expect to increase very materially our book and test advertising. The old question of cigarette and whiskey advertising raises its ugly head.

6. *Reduce administrative costs.* It now costs about \$31,000 a year to administer our journals.

This might be reduced, but such a reduction will be difficult, as the previous pages have shown.

7. *Reduce editorial costs.*¹ The editorial costs, including salaries for the *Abstracts* office, for the Central Office editorial staff, and for one-quarter of a person to manage the *American Psychologist* came to about \$20,000 in 1951. It will not be any lower in 1952 and 1953 if the same services are required. We can eliminate the central editorial office but the editors seem to find the service very useful and perhaps necessary.

8. *Raise dues.* Increased dues can help the publications. The line between publication function and nonpublication function is an indistinct one. As long as the Association operates in the black, nobody cares much where the money comes from. As long as we publish good journals, run good conventions, and have good committees, nobody cares much where the money goes.

9. *Decrease nonpublication activity so that dues income can go into publications.* This is possible, but in this complex time of our lives as a science and profession the APA is under constant pressure to do more rather than less.

¹ It might be interesting to compute the cost of APA journals if (a) we had to pay our editors for their services, (b) we paid for all secretarial assistance editors use, and (c) if we paid for the space our editors occupy when they are working for APA. It probably takes about one-third of a psychologist's production time to edit a journal. With nine editors, this gives to APA the equivalent of three full-time men. Our editors are worth \$10,000 or more per year. We have an annual figure of \$30,000, then, for editorial services. Three full-time editors would use three full-time secretaries. That's another \$8,000. Office space, in Washington at least, costs \$3.00 or more per square foot per year. Let's give an editor and his secretary 100 square feet apiece. That's \$2,700 a year. Thus the readers of and contributors to our journals are annually given at least \$40,700 worth of time and space. If this were paid for, our journals would cost about 17 per cent more and we would be deep in the red. *Somebody* pays for our editorial services.

10. *Find ways to subsidize publication.* Millions of dollars per year go into sponsored psychological research. Little goes into the support of publication. Sponsors of research, in a way, are getting publication at the expense of libraries and individual members of APA. It would seem desirable and equitable to find ways for sponsors of research also to sponsor publication.

11. *Start new journals.* The number of psychologists is increasing rapidly. The number of manuscripts submitted for publication is also increasing. There is continual pressure to increase the size of our journals. We cannot add pages without increasing costs. One solution would be to start new journals to take care of the increased flow of manuscripts. Self-supporting new journals would be a possible solution.

12. *Invent new procedures for achieving scientific communication.* For a very long time there has been no change in the form and media of scientific communication. Its amount has increased enormously but we go about the process much as grandfather or Wundt did. It is very troublesome and very expensive to print articles on paper and mail large numbers of bulking journals—probably containing many articles read by only a small number of experts and specialists. What about microcards and every APA member with a viewer? What about some other procedure that would meet our needs at a lower cost and with greater efficiency? To break with tradition is painful, but perhaps we should consider ways of streamlining our publications.

13. *Do nothing.* We are not in desperate financial straits. We have a reserve fund, built up principally from the sale of back issues. With the new building, this reserve will no longer be liquid, but we can operate at a deficit for a few years and still survive. The Finance Committee will worry hard, however, about such a course of action.

FILLMORE H. SANFORD

Psychological Notes and News

Schachne Isaacs died August 12, 1952, at the age of 63. He was a clinical psychologist in the audiology section at the Walter Reed Army Medical Center, specializing in psychological problems of persons with hearing defects.

Gardner Murphy, chairman of the department of psychology at the City College of New York, was appointed director of research at the Menninger Foundation, as of September 1, 1952. He is succeeded at City College by **John Gray Peatman**. Also on September 1, **Lois Barclay Murphy** began an appointment as senior psychologist in the department of social applications of psychiatry at the Menninger Foundation.

Evelyn Carrington was elected president of the International Council of Women Psychologists and assumed office at the annual meeting in September.

On February 1, 1952, **Warren C. Middleton** left his position as professor of psychology at DePauw University, where he had taught for twenty-five years, to accept an appointment as staff associate in the Washington office of the American Association of University Professors.

William C. Westberg, formerly of North Carolina State College, Raleigh, North Carolina, has been appointed professor in industrial psychology, and **Forrest B. Tyler**, of Ohio State University, has been appointed assistant professor in clinical psychology at Southern Illinois University, Carbondale, Illinois. Dr. Westberg and Dr. Tyler joined the staff at Southern Illinois in September, 1952. **Leslie F. Malpass** of Syracuse, New York, joined the staff in March, 1952. These three additions, with the appointment of **Noble H. Kelley** as chairman in September, 1951, form the nucleus of a new all-university department of psychology at Southern Illinois University.

William C. Kvaraceus, professor of education in Boston University, has been granted a sabbatical leave to serve as adviser to the Turkish Ministry of Education on problems in the education and training of exceptional children. He will also give courses at Gazi Teachers College in Ankara.

Joseph M. Sacks has completed his tour of military duty at Madigan Army Hospital and has returned to his position as psychotherapy supervisor at the Franklin D. Roosevelt Veterans Administration Hospital, Montrose, New York.

William D. Glenn retired from his position at New York University after 25 years of service. Since 1927 he has been associate professor in the department of psychology, and he has also served as director of psychological services since 1945 and director of the Reading Institute since 1950.

H. A. Witkin has been appointed director of the laboratory for research in psychodynamics and associate professor in the department of psychiatry of the State University of New York College of Medicine at New York City.

Arthur H. Davison has joined the clinical psychology staff at the Veterans Administration Hospital, Perry Point, Maryland.

J. Warren Thiesen is now chief clinical psychologist at the Boston VA Mental Hygiene Unit. He was formerly with the Providence VA Mental Hygiene Unit.

E. Victor Mech was appointed research psychologist in the Institute of Educational Research, and instructor in educational psychology, in the School of Education at Indiana University, Bloomington, Indiana, as of May 1, 1952.

Robert G. Kaplan has been released from the Army and has entered private practice in San Diego, California.

W. A. Reynolds has left his position at Barton, Batten, Durstine and Osborn to go to McCann-Erickson Advertising Agency to be in charge of overseas research.

Leo Goldman, at present assistant professor of education at the University of Buffalo, has been relieved of half his duties in the School of Education, effective June 1, in order to assume half-time duties as acting director of the vocational counseling center of the University.

Carleton F. Scofield, chairman of the department of psychology at the University of Buffalo, has been granted leave of absence to assume the assistant directorship for psychological warfare of the Human Resources Research Office in Washington, D. C.

William B. Michael, formerly on leave of absence from San Jose State College as research associate in psychology in the social science division of the RAND Corporation, Santa Monica, California, has been appointed director of the test bureau and associate professor of psychology and education at the University of Southern California, effective September 1.

John M. Stalnaker, director of studies for the Association of American Medical Colleges, will act as a consultant during 1952-53, on a part-time basis, to the Fund for the Advancement of Education. He will be concerned with the field of scholarships. The Fund, of which Clarence Faust is president and Alvin C. Eurich, vice-president, was established by the Ford Foundation.

Henry L. Sisk has resigned from his position of director of industrial relations and personnel at Milprint, Inc., Milwaukee, Wisconsin to accept the position of director of organizational development, Central Region Continental Can Company, Inc., Chicago, Illinois.

The **Wichita Guidance Center** has appointed the following to internships beginning September 15th: Albert Bandura, Iowa University, Donald Spence, Teachers College, Columbia University, Glen Roberts, University of Kentucky, and H. E. Wheeler, Washington University, St. Louis. Aileen Clawson has been appointed to the position of junior psychologist.

The **Marshall College Psychology Department** conducted a series of six television programs last spring on the topic "This is Psychology." Kenneth Loemker, Madeleine Feil, and Donald Perry were among those who participated in the program.

The 1952 Kentucky General Assembly recently passed a **Kentucky Professional Titles Act**, which is of interest to professional psychologists. Section 1 of the Act states:

"Section 1. (1) No person shall, in connection with the practice of medicine, surgery, osteopathy, optometry, dentistry, chiropody, pharmacy, chiro-

practic, psychology or psychiatry, nursing, anesthesiology, physio or physical therapy, or any other profession or business having for its purpose the diagnosis, treatment, correction or cure of any human ailment, condition, disease, injury or infirmity, hold himself out as a Doctor or employ or use in any manner the title 'Doctor' or 'Dr.' unless he actually has graduated and holds a doctor degree from a school, college, university or institution authorized by its governing body to confer such degree."

"(2) No person who holds a doctor degree, as provided in subsection (1) of this section, shall use or employ the title 'Doctor' or 'Dr.' in or upon any letter, statement, card, prescription, sign, listing or other writing, without affixing suitable words or letters designating the particular doctor degree held by such person."

A **three-day workshop in the use of the Rorschach technique** is being held on September 19, 20, and 21, 1952 at the psychology department, Crownsville State Hospital. This workshop will be conducted by Florence Halpern who will present records of schizophrenic's, depressive's and organic's cases and children. The fee is \$10.00. For information write to Vernon W. Sparks, Acting Chief Psychologist, Crownsville State Hospital, Crownsville, Maryland.

The next meeting of the **Committee for the Scientific Study of Religion** has been planned for December 26-27 in New York. Social scientists who would like to present papers should send abstracts of not more than 300 words to Professor Talcott Parsons, Department of Social Relations, Harvard University, Cambridge 38, Massachusetts.

The **Society for Clinical and Experimental Hypnosis** will hold its annual scientific meeting on September 27, 1952, at the New York Academy of Sciences, 2 East 63rd St., New York City. This will be an all-day meeting, and all who are interested in the scientific aspects of hypnosis are invited to attend.

The **Tenth Annual Reading Institute** at Temple University will be held during the week of February 2-6, 1953. The theme will be the "Curriculum Approach to Reading Instruction." Its purpose will be to point up the need for an integrated program of reading in every phase of the child's school curriculum. The activities will in-

clude lectures and discussions, demonstrations, laboratory practice, evaluation of reading programs, seminars, staff meetings, and conferences with staff members. Advance registration is required. For a copy of the program and other information regarding the Institute write to Emmett Albert Betts, Director, The Reading Clinic, Temple University, Broad and Montgomery Avenue, Philadelphia 22, Pennsylvania.

Ten graduate students majoring in clinical psychology have been selected to continue their education under the Senior Psychology Student Program sponsored by the Army Medical Service. They are **Alvin O. Bellak**, Pennsylvania State College; **Murray Cook**, New York University; **William E. Dattel**, University of California, Los Angeles; **Aaron G. Parker**, University of California, Los Angeles; **Richard Sandison**, Harvard University; **Jack H. Scott**, University of Illinois; **John R. Smith**, University of California, Los Angeles; **Robert M. Brown**, Princeton University; **Sidney R. Hyman**, University of Pittsburgh; and **Richard W. Roberts**, University of California, Los Angeles.

To qualify for participation in the program, a student must need no more than two years to complete requirements for his PhD degree in clinical psychology. Selectees continue their studies while they receive the full pay allowances of second lieutenants in the Medical Service Corps Reserve. Upon completion of their academic work, graduates must apply for a Regular Army commission in the Medical Service Corps, and if appointed, must agree to serve at least three-years' active duty. Qualified applicants are appointed first lieutenants when they enter the Regular Army.

Since the inauguration of the Senior Psychology Student Program in 1949, fourteen graduate students have completed their studies in this program and subsequently received commissions in the Regular Army, serving as clinical psychologists and research psychologists. Applications of graduate students and inquiries concerning the program should be addressed to The Surgeon General, Department of the Army, Main Navy Building, Washington 25, D. C., attention: Chief, Personnel Division.

The Educational Testing Service is offering for 1953-54 its sixth series of research fellowships in psychometrics leading to the PhD degree at Princeton University. Open to men who are acceptable to the Graduate School of the University,

the two fellowships each carry a stipend of \$2,500 a year and are normally renewable. Fellows will be engaged in part-time research in the general area of psychological measurement at the offices of the Educational Testing Service and will, in addition, carry a normal program of studies in the Graduate School. Competence in mathematics and psychology is a prerequisite for obtaining these fellowships. The closing date for completing applications is January 16, 1953. Information and application blanks will be available about November 1 and may be obtained from: Director of Psychometric Fellowship Program, Educational Testing Service, 20 Nassau Street, Princeton, New Jersey.

Three fellowships given by the Educational Testing Service for the present year have been awarded to **Bertram P. Karon**, a graduate of Harvard University; **Robert Sadacca**, a graduate student at Columbia University; and **Edward G. Nolan**, a graduate student at the University of Edinburgh, Scotland. **H. Paul Kelley**, **Samuel J. Messick**, and **Richard E. Wortman** have been reappointed as ETS Psychometric Fellows.

The Second Graduate Fellowship Program of the National Science Foundation, providing awards for study during the 1953-54 academic year in the mathematical, physical, medical, biological and engineering sciences, will get under way early in October.

The majority of awards will be made to graduate students seeking master's or doctor's degrees in science, although a limited number of awards will be made to postdoctoral graduates. NSF graduate Fellows are selected solely on the basis of ability. Candidates will be judged on their scientific aptitude and achievement as reflected in academic records and recommendations from individuals who are familiar with their scientific aptitudes. Pre-doctoral applicants will take an examination designed to measure scientific promise and level of advancement.

NSF graduate Fellows may attend any accredited nonprofit institutions of higher education in the United States or similar institutions abroad. Stipends vary with the academic status of the Fellows. First year Fellows—students entering graduate school for the first time or those who have had less than one year of graduate study—will receive a stipend of \$1,400. Fellows who need one final academic year of training for the doctor's degree receive a stipend of \$1,800. Fellows between these

groups will receive a stipend of \$1,600. The basic stipend for postdoctoral Fellows will be \$3,400 per year. Dependency allowances will be made to all married Fellows. Tuition and laboratory fees and limited travel allowances will also be provided.

Application forms for both predoctoral and postdoctoral graduate fellowships for the 1953-54 academic year may be obtained after October 1, 1952, from the National Science Foundation, Washington 25, D. C. Completed applications must be returned to the Fellowship Office, National Research Council, by January 5, 1953. The special examination for predoctoral candidates will be given at various places throughout the United States on January 31, 1953.

The Association Internationale de Psycho-technique is now publishing a Bulletin at six-month intervals, containing news items of interest to specialists in applied psychology. Members of the Association are asked to send in material on activities of psychologists in their countries. Correspondence should be addressed to the General Secretary of the Association Internationale de Psychotechnique, 41, Rue Gay-Lussac, Paris (5^e), France.

The Bell Telephone Laboratories, some four years ago, initiated a program of basic research on broad problems concerning the relation between future communication systems and the preferences of human beings. This program is now on a modestly flourishing basis. The research team includes personnel from the fields of physics, engineering, statistics, and psychology. **Ralph K. Potter, Walter A. Shewhart, and John E. Karlin** were among those responsible for planning the program, and the last named is now directing it.

The Counseling Center of the University of Chicago announces the publication of the first three reports to grow out of its comprehensive research project in psychotherapy. The reports are contained in a double issue (165 pages) of the *Psychological Service Center Journal* (1275 New Hampshire Avenue N. W., Washington 6, D. C.) which has recently come off the press. The research is concerned with the processes and outcomes of psychotherapy, and is financed by a grant from the Rockefeller Foundation.

These first three papers cover the over-all planning and development of the research program; the

research design and procedures for the cases in Block I; and a complete presentation of all the research data on one of the cases from Block I, illustrating the complex methodology being used. Participating in the authorship of these articles are the following members of the staff of the Counseling Center and the department of psychology of the University of Chicago: Thomas Gordon, Donald L. Grummon, Carl R. Rogers, Julius Seeman.

Other articles will be published in the near future, for the most part in the *Psychological Service Center Journal*, giving further reports of the results of this research.

A research project on the development and validation of selection techniques for the National Science Foundation predoctoral and postdoctoral fellowship programs has recently been initiated by the National Science Foundation to be carried out by the Office of Scientific Personnel of the National Research Council, Washington, D. C., M. H. Trytten, Director. Calvin W. Taylor has been granted a year's leave of absence from the University of Utah to direct the research program. An advisory committee on selection techniques consisting of W. J. Brogden (chairman), David C. McClelland, Frederick Mosteller, John M. Stalnaker, and Robert L. Thorndike, has been organized to guide the research activity. Dael L. Wolfe is serving as a consultant to the project.

The Publication Manual of the American Psychological Association was published as a Supplement to the July *Psychological Bulletin*. It has also been mailed to all members of the Student Journal Group. Additional copies may be obtained from the APA office at a price of \$1.00 per copy.

The Psychological Notes and News section of the *American Psychologist* is planning to begin the publication of items announcing current research projects or research-in-progress in psychology. These items will include projects sponsored by government agencies, foundations, universities, institutes, and other institutions, and major research programs developed by individuals. Psychologists engaged in such projects are invited to submit information about them, including the name of the project, a brief description of the research being conducted or planned, the names of those primarily responsible for carrying out the work, and any other relevant facts.

Convention Calendar

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Ready in September

CONTRIBUTORS

Claude E. Buxton, *Yale University*, Charles N. Cofer, *University of Maryland*, John W. Gustad, *Vanderbilt University*, Robert B. Macleod, *Cornell University*, Wilbert J. McKeachie, *University of Michigan*, Dael Wolfe, Chairman, *Commission on Human Resources and Advanced Training*.

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